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Canadian Foresters Inspect U.S. Woodlands

Representatives of the Woodlands and Pulpwood Departments of Various Canadian Mills Participate in the Annual Summer Excursion of the Woodlands Section of the Canadian Pulp and Paper Association—Party Inspects Woodlands Operations in New York, New Hampshire and Maine—

More than forty representatives of the woodlands and pulpwood departments of the various Canadian mills participated in the annual summer excursion of the Woodlands Section of the Canadian Pulp and Paper Association on August 4 to 10, 1929.

Visit Finch Pruyn & Co.

Starting from the Association headquarters the group proceeded to the Lake Harris House at Newcomb, N. Y.. Monday and Tuesday were spent in studying the operations of the Finch, Pruyn & Co. at Newcomb, Indian Lake and Glens Falls. Here special attention was paid to the methods used for girdling hardwoods in mixed tree areas.

On Wednesday a visit was made to the Forest Nurseries of the New York State Conservation Commission at Saratoga Springs where fifty million young trees are growing.

By Automobile to Lincoln, N. H.

Travelling by automobile the party moved along the Lincoln, N. H. where they were taken by the logging railroad of the Parker Young Company to their operations near Lincoln where cutting and yarding is in progress. This was followed by a visit to the saw mill and pulp and paper mills of the company after which the group journeyed on to Gorham, N. H. where they remained overnight at the Mt. Madison House.

At Brown Co.'s Berlin

Friday at the Brown Company House in Berlin, N. H. an address of welcome was delivered by W. R. Brown. Following this they inspected the forestry office, show room and seed extracting plant and paper mill. In the afternoon the Jericho Forest was visited. This area includes all the wild lands owned by the Brown Company in Berlin, N. H., and west of the Androscoggin River in Milan, N. H. It is nearly 10,000 acres in extent, and contains examples of all the principal forest types of this region. The forest was set aside in 1925 as an experimental area for trying out various forms of silvicultural treatment, and as a demonstration of sustained yield management. It is planned to cut in such a way that a normal distribution of age classes will result at the end of one rotation. This requires final cuttings on an average area of 80 acres annually, and an annual cut of approximately 2000 cords including hardwood.

Visit in Maine

On Saturday the party was taken by bus and auto to Carrol Dam and thence by boat to the Hastings operation on Lake Umbagog in Maine and finally to Cupsuptie, Maine where the nurseries were inspected and facilities were provided for remaining overnight at the Company House.

Of outstanding interest to the Canadian visitors were the relatively thick timber stands ranging around 35 cords to the acre in New Hampshire and Maine.

Among Those in the Party

Following are some of those who made the excursion: B. F. Avery, Abitibi Power and Paper Company; C. H. Gardner, Provincial Paper Company, Ltd., Port Arthur, Ont.; G. W. Phipps, Spruce Falls Power and Paper Company, Ltd., Kapuskasing, Ont.; R. W. Lyons, Spruce Falls Power and Paper Company, Ltd., Kapuskasing, Ont.; W. L. Beebie, Wayagamack Pulp and Paper Company, Three Rivers, Que.; R. H. Nesbit, W. G. Wright and N. R. Kane, Price Bros., Quebec, P. Q.; T. G. Earl, St. Lawrence Paper Mills Company, Ltd.; C. W. Aldew, Oxford Paper Company, St. John, N. B.; H. V. Hart, St. Regis Paper Company, Godbot, Que; W. Kishbaugh, and A. Graham, Abitibi Power and Paper Company, Iroquois Falls, Ont.; J. D. Gilmour, Anglo-Canadian Pulp and Paper Company, Quebec, P. Q.; M. Westveld, Northeastern Experimental Station, Amherst, Mass.; P. T. Coolidge, Bangor, Me.; R D. Vago, Price Bros., Ltd., Chicoutimi, P. Q.; H. Kennedy, E. B. Eddy Company, Ltd., Hull, P. Q.; H. L. Moffett, Provincial Paper, Ltd., Port Arthur, Ont.; J. A. Michaud, Port Alfred Pulp and Paper Company, Port Alfred, P. Q.; D. A. Evans, Lake St. John Power and Paper Company, Ltd., Dolbeau, P. Q.; Austin Carey, U. S. Forest Service, A. Koroheff, Canadian Pulp & Paper Association; A. Cadman, Canadian Pulp and Paper Association; Ellwood Wilson and G. R. Lanes, Canada Power and Paper Corporation; Ab. Y'bery, Canadian International Paper Company, Montreal, P. Q.; H. F. Ray, Scott Paper Company, Chester, Pa.; C. W. Boyce, American Paper and Pulp Association; R. G. Macdonald, Secretary, TAPPI; J. A. Duchatel, Quebec Forest Institute; Philip W. Ayers, Society for Protection of National Forests; M. Lockyear, Brown Company, Berlin, N. H.

Preparing To Start Oakland Mill

[FROM OUR REGULAR CORRESPONDENT]

WINDSOR LOCKS, Conn., August 13, 1929.—The Oakland paper mill bought recently from the American Writing Paper Company by C. H. Dexter & Sons, of this town, is being overhauled preparatory to being put in service for the manufacture of manifold paper. Owing to the increased demand for thin and tissue papers, onion skins, etc., due to sales increases, air mail letter sheets and the like, there has been a big demand for this class of paper. The paper manufactured at Oakland will be shipped to Windsor Locks to be finished.

Demand for Paper Falls Off In Philadelphia

Most of Business Transacted During Past Week Consisted of Hand to Mouth Trading—Some Dealers Experienced Heavier Traffic In Summer Specialties—Pennsylvania Paper Mills Are Operating On Livelier Schedule—Paper Stock Market Quiet

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., August 12, 1929.—Drifting with the tide of sluggish summer doldroms the local market continues to carry on its hand to mouth type of paper trading. There are few orders of consequence to be had for the future and whatever present day business is obtained is limited to immediate day to day requirements. A few dealers are having heavier traffic in seasonal specialties. Those who feature mid-summer goods, such as sanitary products, or cater under contract to the larger consumers, are most active.

Though mill orders lack the volume that usually comes with the season there is a livelier operation schedule in most of the Pennsylvania mills. Normal requirements from the distributors are lacking but a few fairly good purchases for delivery in the month-end have been garnered by manufacturers of fine papers, such as unfinished book papers, high grade writings, and cover lines. The newer lines that have recently been offered from distant mills are being well received. Mills that have been surveying the local distributive trade with a view to producing certain lines not usually carried by the larger producers have been granted a hearing by the dealers in the matter of orders for future deliveries and so have been able to keep idle machines operating at capacity. Such orders of course are among the wrapping paper supplies and specialties that are assigned to that division of the industry.

Dealers in fine papers are having draggy days. There has been fairly good purchasing for the greeting card trade, advertising, and other consumers of card products. Unfinished book papers and the better grades of writings continue to be the most active of the small lot buying list. Manufacturing stationers report a livelier interest in school supplies, papeteries and allied converted products, as the stationers prepare for the coming school season. While their offerings of papeteries is extensive, the manufacturers have been chiefly concerned with the creation of new colors and designs in borders and boxes rather than to the production of new papers in Christmas boxes and standard year round supplies.

The hot weather has created a good market for all kinds of sanitary supplies and soda fountain and outing goods. Paper cups, parchments and grease proof supplies, ice cream containers, and cannisters for cold liquids, have all a very good market. The large volume of krafts held over from spring are disappearing. There has been a tendency to await signs of falling prices but the kraft market has held firmly and distributors can now buy with assurance that there will be no break in prices after stocks are acquired. If the dullness of the current summer market, which has been abnormal, has not weakened the kraft market, there is little likelihood that prices will fall in the more active autumn, they argue. So confidence in the future steadies the present kraft situation.

There is a prolonged dearth of volume buying among the paper stock and rag dealers as the mills continue to buy in limited quantities. However, a hopefulness has sprung into the bsuiness outlook as the manufacturers are now inquiring for future deliveries.

Mills Continue To Extend Electrical Units

As the growing use of electricity makes imperative the installation of additional units in drives and motors in the paper mills the Westinghouse Electric and Manufacturing Company, Philadelphia branch, is forging ahead in its equipment of the paper mills of the East and South. Having made completions in the Pennsylvania manufacturing trade within recent weeks the Westinghouse is now giving attention to the units that are about to be completed in the Virginia paper making centers. In the Virginia Cellulose Company, at Hopewell, Va., there is installed a new Westinghouse Synchronous motor which will be devoted to the operation of the Jordan in the manufacture of cellulose cotton. This mill recently was acquired by the Hercules Powder Company.

Albemarle-Chesapeake Corp. Installs New Units

In the paper mills of the Albemarle-Chesapeake Corporation at West Point, Va., the Westinghouse Electric and Manufacturing Company has installed a sectional paper machine drive and the units that will be devoted to the operation of the steam turbine and switchboard equipment. This mill was recently constructed and the Westinghouse is installing a large turbine generator in the power room. The company is also equipping the mills with switchboards and complete sectional paper machine drives which will be ready by Fall when the paper machines will begin production.

Westvaco Mill Improvements

Another Ssuthern mill that is now being fitted for electrical operation is that of the West Virginia Pulp and Paper Company at Covington, Va., where the Westinghouse Electric and Manufacturing Company, through the Quaker City offices, is making installations of the sectional and single motor drives with a view to completing them by the time the autumn activity is at hand. The foundation for these units was laid during the past month and the installations will begin immediately. These units will be attached to the previously installed paper making machines that have long been in use and will enable the company to operate by purchased power. With the newer improvements the Westvaco will be able to speed up deliveries on its line of fine papers which are distributed here directly from its own offices in the Public Ledger Building, a policy which the mills adopted several years ago.

A. E. Chase Joins Ward Co.

Alfred E. Chase, who is well known in the Philadelphia trade as a twine salesman has been appointed head of the twine department of the D. L. Ward Company, 28 South 6th street. He will be manager of the department. Previous to joining the Ward Company he was associated with the Columbia Rope and Cordage Mills, of Auburn, N. Y., as manufacturers' representative in the recently opened direct mills offices. The Columbia Company has adopted a policy of selling its products to all distributors rather than confining its local distribution to a single concern, as has been its plan for many years. Prior to the new policy of broader distribution of the Columbia twines and cords the Garrett-Buchanan Company was sole distributor, having purchased the rights of exclusive agents with the Park Weikert Company, which it took over three years ago upon the death of Park Weikert, head of the twine distribution business. A year ago the Columbia company opened its own offices in the Drexel Building with Mr. Chase as manager. With the appointment of Mr. Chase to the management of the D. L. Ward Company twine department, the Quaker City offices of the Columbia Company are placed under management of David Higgins, who comes here direct from the mills in Auburn.

Perseverance Paper Mills Discontinue Office

Philadelphia sales and executive offices of the Perseverance Paper Mills, Inc., located in the Widener Building, have been discontinued and the headquarters of C. Leavitt, head of the company controlling them closed. The Perseverance mills are located in Lambertville, N. J., and have in recent years been remodeled and re-equipped for the manufacture of glassine and grease proof papers. Late last spring the mills were closed down and no word has been given of re-opening although at the time it was the plan of Mr. Leavitt to resume operation. The Perseverance mills were

formerly owned by the Franklin Paper Company and for a time were operated by that company as specialty mills producing lines distributed by the Philadelphia concern. Three years ago they were taken over by the Leavitt interests and turned to the production of glassines and grease proof papers.

Thomas W. Price Co. Adds To Lines

Additional grades of bond papers have been acquired by the Thomas W. Price Company, one of the oldest and best known of the Quaker City fine paper houses. The Price company has added the White Stone bonds, which are made especially for its own trade. These will be stocked in white only. The Price company, which recently took over the former distribution headquarters of the Curtis Brothers Mills, of Newark, Del., has made attractive window trims in various grades of paper in the five windows available in the new building which is known as 35 South 5th street, is now used by the Price company for its sales and executive offices and leaves the old building at 503 Ludlow street to the envelope and warehouse departments and the offices of President Thomas W. Fort, Jr., of the company.

Scott Paper Co. Issues New Line

An entirely new line of sanitary papers has been placed on the market by the Scott Paper Company as a supplement to the standard lines that have been developed in recent years. While the company adds to the machinery at the Chester, Pa. plant there is provision made for the growing demand of the popular priced roll products now marketed as the Sani-tissue and which retails for three rolls for 24 cents. This new roll is a 50 sheet product. It is being distributed through the local offices in the Packard Building. It is being broadly advertised as a bleached sulphite paper at popular prices. The Scott Paper Company has removed the Quaker City branch from Room 2202 Packard Building to 916 Packard Building, where more accessible quarters are located.

Robertson Paper Co. Features Waxed Papers

There has been a complete survey of the Philadelphia trade made by the Robertson Paper Company, of Bellows Falls, Vt., for the prospects of acquiring information on the possibilities of new lines of specialties that may be produced by the Green Mountain State producers for the dealers along the grades that are not always available from stocks of standard papers carried by the general run of mills. The company sent its representative to the trade to make the survey a few days ago and to offer the Fall supply of waxed paper to the dealers as the standard lines manufactured.

Schuylkill Paper Co. Presents Trophy

The Schuylkill Paper Company has presented the Philadelphia Paper and Cordage Association a handsome 18 inch silver cup which will be an annual prize award to be made in the Golf Championship Tourneys conducted by that organization. The Schuylkill company, which is located at 219 South 5th street, and is affiliated with the wholesale paper and twine men's organization, has bestowed the cup upon that body and it will be presented to the winner of Gold Championship play at the next meeting in September. The cup is engraved and is on display at the headquarters of the Hooper Paper and Twine Company, 230 South American street. The head of the Hooper Paper and Twine Company is H. K. Hooper, president of the Philadelphia Paper and Cordage Association. The winners of the championship cup in the past were E. L. Richards in 1927 and 1928, and J. H. Murray in 1929. It will be presented to Mr. Murray at the next meeting. The names of the past winners will be inscribed on the new cup.

Ship Bond Paper by Water from Grays Harbor

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 9, 1929.—The first water shipment of bonded paper ever to leave the Grays Harbor district in Washington State was loaded at Hoquiam on August 9 by the Grays Harbor Pulp and Paper Company. The lot consisted of 150 tons of the first run of paper from the new plant of the Hammermill interests. A smaller lot is being shipped by rail to Cleveland, Ohio.

News of the Boston Paper Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., August 12, 1929.—Carter Rice & Co. Corp., local distributors of lines of Louis Dejonge & Co., are planning to issue among printers in the very near future copies of a booklet just finished by these manufacturers, entitled "Uncoated Facts on Coated Paper." The booklet contains information in regard to the material used in the manufacture of coated papers and the great care exercised in their production. It also contains many pleasing demonstrations of the fine printing qualities of Dejonge papers.

Arthur E. Ham & Sons are sending out samples of Merrimade folding coated in envelopes of the same paper. This line is made by the Merrimac Paper Company, Lawrence, Mass. The folder shows the character of the surface, the color, the strength, and particularly the smooth, durable folding qualities of the sheet. Part of the folder is in colors.

A. H. Chamberlain, assistant secretary of the National Paper Trade Association, visited Boston paper merchants over the week-end.

C. A. Esty, managing director of Carter Rice & Co. Corp., has returned from a vacation at Orr's Island, Me. H. S. Brown, manager of the wrapping paper department of the same company, has gone on a motor trip including New York State and will visit Auburn.

Harrie E. Waite, sales manager for John Carter & Co., Inc., accompanied by Mrs. Waite, has gone to Morgan, Vt., for a two weeks' vacation.

G. D. Allen, treasurer of Knight, Allen & Clark, Inc., has returned from a three weeks' vacation on Cape Cod.

Floyd H. Blackman, vice president of D. F. Munroe Company, has gone to Chichester, N. H., accompanied by his family, for a two weeks' vacation.

E. G. Walker, sales manager for the Collins Manufacturing Company, North Wilbraham, Mass., William Judd, president of the Hampshire Paper Company, Inc., South Hadley Falls, Mass., and Fred May, sales manager for the B. D. Rising Paper Company, Housatonic, Mass., called on the trade last week. For a number of years Mr. May was salesman for the Strathmore Paper Company and recently went to the Rising Paper Company, a subsidiary of the former.

Luzerne Plant to Resume Operations

[FROM OUR REGULAR CORRESPONDENT]

HADLEY, N. Y., August 10, 1929.—The plant of the Luzerne Paper Corporation, shut down since an involuntary bankruptcy petition was filed a week ago, is planning to resume operations soon and all employees will receive their back pay, according to announcement by the receivers. William H. Redlein, of Hadley, and George Hatt, of Albany, were recently appointed receivers of the firm in federal court. It was also announced that as soon as raw materials are received at the local plant all equipment will be set in motion on a full time basis.

The employees of the plant were unaware that financial difficulties were being encountered by the firm until about two weeks ago when their pay envelopes failed to appear. Most of the men worked the second week until the plant was closed without receiving any compensation but all are confident that they will be paid in full. The plant has been operated by the firm for the past three years with wrapping paper as the chief manufactured product.

Package Paper Co. Expanding

HOLYOKE, Mass., August 13, 1929.—The Package Paper Company, which recently moved from Springfield and obtained floor space in the Hadley Thread Mill property, bought by the municipal lighting department of the city of Holyoke, has greatly enlarged its quarters. It at first leased about 12,000 square feet and now occupies about 60,000 square feet.

Paper Mill Activities Slacken in Ontario

Quieter Period of Trading Which Now Prevails, Attributed to Holiday Season and General Business Conditions, Which Have Been Affected by Partial Loss of Crops—Paper Box Production Falls Off Considerably—Fine Paper Market Fairly Active

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., August 12, 1929.—There has been a noticeable slackening of activity in most paper lines during the past two or three weeks, both in the manufacturing and distributing ends of the industry, due largely to the holiday season which has been at its peak, and to general business conditions which have been affected by the partial loss of the Western Canada crops. Board mills, for instance, are operating lightly—a reflection of quiet conditions in the paper box industry. The manufacturing volume of paper boxes has fallen off considerably this summer as compared with last year's record at the same period and business now is decidedly spotty. Most of the manufacturers are working on standard lines just now and will be for the next month, but the volume of their turnover is not large. About the beginning of September they will be turning in on Christmas lines and the outlook for these is said to be good. The prospects for fall trade in all branches of the paper industry are bright and in the meantime a fair volume of business is being done in some lines of paper.

Book paper mills, for instance, while not having the volume of orders booked ahead as during the early spring months, have still a considerable leaway in this regard, and while they are down on current orders they have still a lot of tonnage booked for future delivery. Coated papers are not in strong demand at the moment but with the approach of the Canadian National Exhibition in Toronto, which opens for two weeks at the end of this month, there will be a large consumption of coated and other papers. Many automobile and other catalogues and publications of a direct mail character are not sent to press until a few days before the big show opens and many of them are later than usual this year. The Canadian National Exhibition has over two millions visitors during its two weeks' progress and the thousands of exhibitors are extensive consumers of paper.

Manufacturing activities are keeping up fairly well in the fine paper field, with book, bond, writing and ledger papers enjoying good business considering the holiday season, but with an expected reduced volume of orders that will be made up in the fall again. There has been only a moderate diminution in demand for fine papers. On the other hand the coarse paper section has experienced a falling off in demand during the past month. The wrapping paper business is not so well organized as other branches within the Canadian Pulp and Paper Association and they still have some problems to solve, as have also the paper bag manufacturers and distributors among whom the competition for business is strong, with price-cutting rife. The paper converting trade is gradually coming back after rather a quiet period and envelopes, loose leafs, blank books and other converted lines are beginning to pick up materially. Light weight paper manufacturers are enjoying good business. There is a good demand for all lines of tissues and toilets, with tissue paper towels, napkins and specialties undergoing ready sale. A similar condition exists among mills manufacturing grease proof, glassine and similar lines, new uses being continually developed for these papers. The rag and paper stock dealers report a good demand for paper waste, especially, with collections of both paper and rags satisfactory and a good call from the paper mills for all the stock they can assemble.

Hinde & Dauch Factories Busy

The three factories of the Hinde & Dauch Paper Company, located in Toronto, Montreal, and Winnipeg, are currently working at capacity. Despite the fact that not so large a profit is being secured on the output as was the case formerly, owing to the keenly competitive conditions which prevail, the tonnage being handled is very much greater than existed a year ago. The company is fully one month behind schedule in filling its orders. The company was established in 1910 and today it is not only the largest manufacturer in the Dominion of fiber shipping boxes and corrugated paper products but the largest producer of straw paper for corrugating purposes. A $1,500,000 addition to the Toronto factory has been completed and the machinery, now installed, is giving a good account of itself. An addition to the Montreal factory, where are turned out solid fiber boxes, has practically doubled the available floor space. The Trenton factory, which is designed for the manufacture of straw paper for corrugating, has had its capacity increased from 35 to 75 tons a day. In the last fiscal year, which terminated on December 31, 1928, there was a balance available for dividends on the common stock of $528,504, equal to $1.76 per share outstanding. These earnings, in view of the progress being made by the company, are likely to be materially increased during the present year. There is, however, no talk of a dividend until equities have been further established behind the stock.

Donnacona to Make Wallboard

Donnacona Paper Company will break into a new field this autumn with the production of a new wallboard product. The plant is now being prepared, and, according to an official of Price Bros., which controls the company, the product is expected to make its debut on the market some time this fall. The plant will have a daily capacity of 150,000 square feet, and the addition of this new factory will diversify the company's output materially. Wallboard is a wood fiber product, which utilizes wood screenings which are a by-product in paper manufacture. Not long ago the International Paper Company took over a plant at Midland, Ont., manufacturing a certain brand of wallboard, and they have now constructed a new wallboard plant at Gatineau, Que., with over eight acres of floor space and an ultimate production capacity of 600,000 square feet of board per day. As far as the rest of the Donnacona plant is concerned it continues to operate at capacity. It has maintained practically a 100 per cent ratio of operations during the year, and there are substantial orders on hand which should keep the company busy for some time to come.

Dryden's Sales Good But Expenses High

With its financial troubles out of the way and good business on its books, the Dryden Paper Company, Dryden, Ont., will soon be finishing one of the best seasons it has experienced in years. The company's fiscal year ends on September 30 and it is stated that a good showing will be made when the final figures are submitted to shareholders. One thing, however, that will detract from the net results of 1929, is the fact that during the present fiscal period the company has had to face some heavy expenses in connection with the removal of the receivership and the various expenses that must of necessity be incurred in connection with new financing and placing its financial structure on a sound basis. In view of this circumstance it it believed that the company will not show such large earnings as was thought to be the case. Last year the company had earnings, before deducting depreciation and federal taxes, of $324,129, which gives an outside figure of a little over $2 per share earned on the present capitalization of 150,000 shares. Although sales have been substantially higher this last year, and although the company is undoubtedly in a stronger position now than a year ago it is doubtful if more than the $2 figure

will be shown this year, in view of the expenses noted that will have to be met. The company's business is, of course, all domestic, and situated in Eastern Canada its shipments are made to the western districts. The prospect of a light crop in the West is not considered a serious drawback by those in touch with the company's sales, as the products of kraft and manila papers are what might be termed bread and butter lines and it would take a severe check in western purchasing power to affect these staple lines. A small proportion of the company's output is in building papers and some reduction in the sale of this line may be looked for in the event of a general slackening up of purchasing power in the west, which would undoubtedly affect construction. The major part, however, of the output is derived from its sale of kraft paper and sulphite pulp, a large percentage of which is contracted for under a five-year agreement with the Bates Valve Bag Company. Largely as a result of this contract production has been maintained at a high level. The balance of the output, approximately one-third of the total, or 5,000 tons of kraft paper, is distributed throughout the West.

Notes and Jottings of the Trade

George W. Brown, formerly sales manager for Firstbrook Boxes, Ltd., Toronto, has been appointed Secretary-treasurer of the company, succeeding A. H. Vanderburgh, who had been with the firm for about 29 years. Mr. Brown himself has been with the Firstbrook company for over four years and is widely known in paper box circles.

The marriage recently took place in Baltimore of Edward Long, purchasing agent of the A. E. Long Company, Ltd., paper box manufacturers, Toronto, and Miss M. Warner. Mr. Long brought his bride back to Toronto where they will take up residence.

Con. Redmond, formerly superintendent of the Montrose division of Provincial Papers, Ltd., and now resident in Los Angeles, Cal., was a visitor last week to Toronto and the Niagara Peninsula.

The many friends of A. P. Costigane, secretary-engineer of the Ontario Pulp and Paper Makers' Safety Association, were pleased to greet him following his recovery from a serious illness which kept him away from his office in Toronto for some weeks.

Fred Fielder, of the Fielder Paper Box Company, Ltd., Toronto, has been appointed editor of the Broadview Association's publication in that city.

J. H. Legris, forest supervisor for Thunder Bay, has closed the Fort William Paper and Black Sturgeon Pulp concessions in the Nipigon district to all traffic. This action, Mr. Legris said, was made imperative by the large number of bush fires which have occurred in the district. He states that the prospectors have caused many of these fires. The fire situation throughout Northern Ontario and the West generally has materially improved, although fires in some sections are still raging, while rains have quenched the blazes in other quarters.

During his recent visit to Vancouver, Edward Beck, secretary of the Canadian Pulp and Paper Association, was entertained by A. E. McMaster, managing director of the Powell River Company, at a luncheon, at which also representatives of the Pacific Mills, Ltd., and the British Columbia Pulp and Paper Company, Ltd., were guests. Opportunity was given for the discussion of pulp and paper business conditions and prospects, and general trade conditions on the Pacific Coast and in the East. Mr. Beck states that he found an optimistic spirit prevailing throughout the West so far as news print is concerned.

Many Toronto paper men received with deep regret news of the death in London, Eng., of W. B. Carmichael, of the firm of W. B. Carmichael and Co., of Sydney, Australia. Mr. Carmichael was a prominent importer of fine papers and had connection with many Canadian firms manufacturing paper lines. He handled the products of a number of the Canadian firms.

In connection with the paper mulching experiments that are being conducted in Lincoln County in Ontario, on melons, tomatoes, corn, etc., Professor A. H. Maclennan and T. H Jones, of the Ontario Department of Agriculture, have been making a tour of that county. At the moment it seems to be the opinion of expert circles that the mulching of vegetable crops with paper, although the process is said to have been successfully employed in the tropics, is proving too expensive for wide adoption in Ontario. It is possible, however, that as the process is tried out further economies will be developed that will make the mulching of small grown vegetables feasible. Meanwhile the experiments are being watched with interest by the paper trade.

Little Change in Demand at Indianapolis

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., August 12, 1929.—No change, at least for the better, is seen in the local paper market here. This applies particularly to fine papers. Word from various sections of the State where there are rather large mills manufacturing fibers and corrugated boards and heavy boards to be used in box and carton manufacture, is a little more encouraging. Generally speaking there has not been the acute summer slump that generally features the market at this time of the year. Most of the industrials using this sort of container have kept pretty busy during the summer and the demand has been steady.

Some inquiries now are being made concerning glassine and other papers for use for the holiday trade. Some of the box manufacturers are completing their designs and have begun production of this type of merchandise. Indications point to as good a year as was had last. It is significant to note, according to jobbers, the increasing amount of glassine that is being used in the cigar business. More and more brands are being turned out with this sort of wrapper.

Building papers are moving only in fair volume. The lateness of the season this year had much to do with slowing down the entire market and the volume this year will hardly be as heavy as last year. News print is moving in about the same volume.

Paper Business Improves In Chicago

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., August 12, 1929.—A general improvement in summer business is reported throughout the Chicago paper market. Although the improvement is moderate it covers most of the classes of paper represented in Chicago. Ground wood papers are said to be moving along at a good gait with their trouble of over production bettered by increased demand. The news print market is moving along rapidly to fall demand with business holding up well.

Fine papers are credited with holding a fair position at the present time. Although the margin of profit continues to be somewhat close Chicago paper dealers are putting forth every sales effort to hold the ground gained throughout the past few months. Wrapping papers are seasonably quiet, as are the boards. Smaller mills and specialties are reported to be experiencing better business than many of the so-called "big fellows."

Chicago Paper Salesmen's Plans

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., August 12, 1929.—The local Salesmen's Association, under the direction of Harold Knott, president, is laying plans for its first Fall meeting on the Monday following Labor Day. An elaborate program is being worked out. In the meantime the golf committee has announced that the next golf event has been postponed from Thursday, August 15, to Wednesday, August 21, in order that the members may get the opportunity to play on the famous Westmoreland course, which, while not ordinarily open to the public, is to be used through the courtesy of Warren Moore. The "speed" of this well known lay-out is sure to draw a record crowd. Word also comes that Samuel C. Knode, president of the association, is offering a splendid trophy for the lowest nine holes at the wind-up salesmen's event in September.

Consolidated Water Power and Paper Progress

Satisfactory Earnings of Wisconsin Rapids Organization Results In Extra Dividend of 1 Per Cent Being Declared On All Stock Held July 31—Company Entertains 100 Newspaper Publishers Over Week End On Trade Relations Tour In Wisconsin

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., August 12, 1929.—Earnings of the Consolidated Water Power and Paper Company, of Wisconsin Rapids, Wis., have been on such a satisfactory basis this year that the company saw fit to pay an extra dividend of 1 per cent on all stock held as of July 31. The company usually has paid its stockholders 6 per cent, but this year the dividend will become 7 per cent due to the extra payment.

Publishers Visit Consolidated Mills

One hundred newspaper publishers from Illinois, Indiana, Iowa, Michigan, Missouri, Wisconsin, Minnesota, the Dakotas, Nebraska and Oklahoma were guests of the Consolidated company over the week end on a trade relations tour. They started last Friday from Chicago aboard a special train, going first to the state capital at Madison, Wis., and then to the Wisconsin Dells for a scenic boat ride. The train then went to Wisconsin Rapids. The publishers were taken through the Consolidated mills, where they were shown the steps in the making of news print from logs to the finished product. A banquet was given for them in one of the company buildings and they were welcomed by George W. Mead, president.

The remainder of the tour took them to Superior, Wis., and Duluth, Minn., and to the Henry Clay Pierce estate on the Brule River, where former President Calvin Coolidge spent his vacation last summer. The next stop was at the Bayfield Peninsula, the most northern point in Wisconsin, noted for its scenery and recreation features. A boat ride was also provided when the train reached Eagle River. From there the publishers were taken back to their starting point in Chicago. All expenses of the trip were borne by the Consolidated company.

Paper Products Plant Damaged by Fire

A fire loss of approximately $100,000 was suffered by the Economy Paper Products Company, of Milwaukee, Wis., last week. Flames starting in the night in a pile of waste swept up after the day's work quickly ignited quantities of waxed paper and set the entire plant ablaze. The building was a one story frame structure about 300 feet long with a 100 foot wing, and all parts were aflame. It is estimated by W. E. Johnson, general manager, that the loss to stock was $25,000, and to machinery and equipment $75,000. The fire is believed to be of incendiary origin.

Mr. Johnson says the company was about to move its plant to a more suitable building. Some of the machinery is damaged so badly that it will not be moved, but the company will buy new machines when it takes possession of the new place.

Dam May Be Raised and Enlarged

In order to provide additional hydro-electric power, the Union Falls Power Company has applied to the Wisconsin Railroad Commission for permission to raise and enlarge its dam across the Menominee River. The power company is a subsidiary of the Marinette and Menominee Paper Company, of Marinette, Wis. It is believed that enough power can be produced by raising the dam two feet to give the company all it requires at any time for mill use and still leave a surplus to be sold to the public. A hearing was held on the petition recently, at which 25 farmers objected to the change. They claim that their lands have become flooded and that seepage has spoiled their crops.

Wisconsin's Forest Conservation Program

Funds with which to expand Wisconsin's forest conservation program will be provided through a tax levy of one-twentieth of a mill on property, according to a bill which has passed the state senate. The bill still is to be voted on by the state assembly.

Wisconsin expects to appropriate a total of $1,200,000 for conservation work. Of this amount $300,000 will be used exclusively for fire prevention, tree planting and other steps necessary to save the timber and pulpwood supply. Since the new forest crop law was passed a year ago, the state has 200,000 acres of privately owned land registered for tree growing. It will be subject to a stump tax of ten per cent when cut. The Nekoosa-Edwards Paper Company, of Port Edwards, Wis., has 31,591 acres planted to trees under the provisions of this law, which makes the land virtually tax-free in the meantime.

News of the Industry

An area of about 4,000 acres of second growth timber was lost in forest fires which cropped out in Northern Wisconsin following a protracted dry spell. The state conservation commission has a force of 400 men battling the flames. With the help of much needed rains, and the lack of wind, the fires finally were brought under control. These are the first fire losses of any consequence in the timbered area for some time.

The family of the late Dedrick W. Bergstrom, deceased president of the Bergstrom Paper Company, Neenah, Wis., receives a total of $1,177,769.14 as the residue of the estate, according to the final accounting. Mr. Bergstrom gave $50,000 to Theda Clark Hospital Neenah, $5,000 to Carroll College and $5,000 to a sister. The residue is to be divided equally between the widow and children, each receiving 196,294.85. The homestead and personal effects go to the widow.

The Gilbert Paper Company, Menasha, Wis., is about to build an addition costing $55,000. Additional operating and storage facilities will be provided by this new unit.

Employes of the Fort Howard Paper Company, Green Bay, Wis., enjoyed a picnic last week. The mill closed down for a day to make the outing possible. There was an attendance of 1,500 persons.

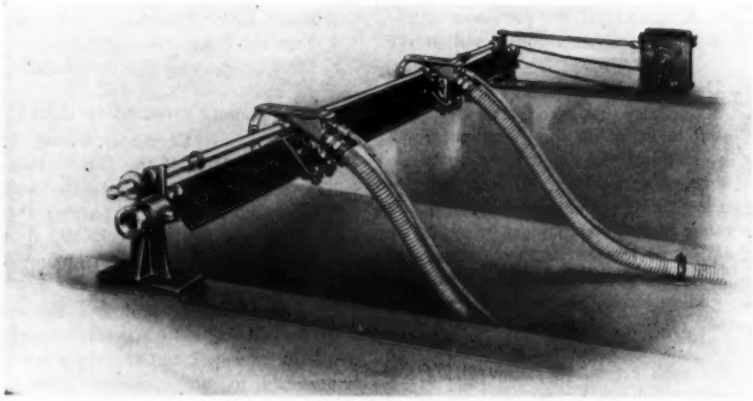
Peter Pohlman, a young millwright employed at the Kimberly-Clark Corporation's mill at Kimberly, Wis., met his death as the result of a fall. He fractured his skull, and died later at a hospital. Mr. Pohlman was on a scaffold in the basement of the machine room and while attempting to put on a belt lost his footing and fell nine feet, landing on his head.

Several other deaths have occurred in paper mill circles. Herbert J. Woelz, a member of Woelz Bros., wholesale paper house of Appleton, Wis., died last week after a five months' illness. John M. Johnson, sales manager for the Marinette and Menominee Paper Company, of Marinette, Wis., died at a hospital in Chicago following two operations. His home was in New York City. L. B. McDermott, former office manager of the Badger Paper Mills Company, Peshtigo, Wis., took his own life last week, presumably because of ill health. He discharged a gun into his brain.

Serious injuries were suffered several days ago by Anton Larsen, an employ of the Neenah Paper Company, Neenah, Wis. He was crushed in an elevator, suffering wounds to his abdomen and chest.

The Northern Paper Mills, Green Bay, Wis., will be visited by 100 delegates who will attend the annual convention at that city of the transportation section of the Wisconsin Utilities Association. A tour of inspection has been arranged as part of the entertainment.

ONE VICKERY FELT CONDITIONER



PAYS FOR ANOTHER

Two thirds of all new Vickery Felt Conditioners go into mills that already have one or more at work.

If it pays to have several — one mill has 41 — can you afford to go without one?

Install one, at our expense, and see how the Vickery Felt Conditioner saves machine time, makes cleaner paper, lengthens felt life.

BIRD MACHINE COMPANY

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3214

Paperboard Industries Association Meets

Members of the Paperboard Industries Association met at the Westchester Country Club, Rye, New York, July 17 and 18, 1929. The Folding Box, Paperboard and Container Group meetings were held on Wednesday, July 17, and the general meeting of all members of the three Groups in joint session, was held Thursday afternoon, July 18.

Folding Box Group Meeting

The Folding Box Group Meeting was presided over by H. H. Stonebarger, of the Globe Folding Box Company, Cincinnati, Ohio, the group vice-president. There was a fair attendance, and members participated actively in a discussion of the problems of the folding box industry. An outline of subjects considered at the meeting, follows:

Extending the Use of Folding Boxes

A staff representative, working under the direction of the Sales Promotion Committee, reported in detail on the effort put forth during the past sixty days in extending the use of folding boxes. Photographs were exhibited showing several types of folding boxes recently developed for the packaging of certain articles, which are now generally packaged in other types of containers.

The report also made mention of interesting developments in connection with a new industry, the products of which may be advantageously packaged in folding boxes. A staff employee has been directed to make a survey of this industry and to report in detail at the next meeting.

There was also a discussion with regard to standardizing the size of folding boxes for specific products.

Statistical-Accounting Subjects

Respecting Statistical-Accounting Subjects, Grafton Whiting, of the Association Staff, reported in detail on the subjects named below:

1. Census of the Folding Box Industry, including a comparison of 1927-1928 production.
2. Cooperation with the Manufacturers of Suit Boxes.
3. Charts and Summaries Showing Operations in the Folding Box Industry.
4. Cost Estimating Manual for the Folding Box Industry.

Increase in Folding Box Group Membership

Vice-President Stonebarger reported to the meeting that at the present time 44 companies are enrolled as members of the Folding Box Group, the present membership of the Group being the largest in number and in tonnage that has ever been included in an association of folding box manufacturers.

Paperboard Group Meeting

Hugh Strange, of the John Strange Paper Company, Menasha, Wis., group vice-president, presided at the Paperboard Group Meeting.

Eliminating the Manufacture and Use of Inferior Container Board

In introducing the discussion regarding the above, Vice-President Strange emphasized that it is the duty of each paperboard manufacturer producing board for use in corrugated and solid fiber shipping containers, to supply a board of the proper quality for the use to which it is to be put. At his request General Manager Browder submitted a resume showing the results of the inspection service, in connection with which corrugated and solid fiber boxes are collected from shippers, tested and examined, and the results given to the shippers who have supplied the boxes to be tested. The summary indicated that there has been a substantial improvement in the quality of the boxes collected and tested during the past sixty days, compared with boxes reported upon in similar past periods. The report clearly indicated, however, that the box manufacturer who uses, for instance, two 85 lb. test facings in making the so-called 200 lb. test corrugated box, is running into difficulty. Most of the boxes which failed to meet the certified requirement, were stamped "200 lb. test," but had unquestionably been made of liners which were not up to the required bursting strength.

Statistical-Accounting Subjects

Grafton Whiting, Statistician-Accountant, submitted a detailed report for the Statistical-Accounting Committee, covering the subjects mentioned below:

1. Census of the Paperboard Industry with detailed figures showing the number of machines, the number of companies, etc.
2. Financial Summary—Including a Compilation Showing Operations in 1928.
3. Kraft Liner Production and Consumption.
4. Tonnage Comparison—1st 6 months 1929-1928
5. Distribution of Maps Showing Location of Mills and Box Plants.
6. Cost Manual Prepared for Mill Division.

Container Group Meeting

H. C. Krannert, of the Inland Box Corporation, Indianapolis, Ind., group vice-president, presided at the Container Group meeting. He reported briefly regarding the meeting of the Executive Committee, mentioning specifically that the Executive Committee had given consideration to arranging for outside speakers to address the members at Association meetings.

General Manager Browder's Report

General Manager Browder submitted a comprehensive report, in which he reviewed and explained a number of subjects of prime importance to the container manufacturing industry and its customers.

The report contained advice as to the action by the Consolidated Classification Committee with respect to subjects considered by the Committee at the April, 1929, hearings. Several of the changes which have been approved and which will be duly authorized in a supplement to the classification, will materially increase the use of corrugated and solid fiber containers.

The general manager's report also contained up to the minute information regarding subjects considered by the Classification Committee at hearings held during the previous week.

The report also made mention of the results of the inspection service, the purpose of which is to maintain the quality of corrugated and solid fiber boxes.

Standardization Committee's Report

R. H. Dollison, of the Fairmont Box Company, Fairmont, W. Va., the chairman of the Standardization Committee, submitted a very interesting and instructive report, which is contained in the minutes of the meeting. The report included the Committee's recommendations with regard to several subjects now pending before the Consolidated Classification Committee, wherein changes have been requested in the specifications contained in Rule 41.

Among other subjects reported upon by the Committee, were the following:

1. Standardizing the Diameter of Paperboard Rolls and Roll Cores.
2. Re Number of Corrugations per Lineal Foot.
3. Container Board Nomenclature.

Statistical-Accounting Subjects

Reporting for the Statistical-Accounting Committee, Grafton Whiting, of the Association staff, covered the following subjects:

1. Census of the Container Industry.
2. Kraft Linerboard Production and Consumption.
3. Distribution of Maps showing Location of Mills and Box Plants.
4. Comparison of Operations—1st 6 Months 1929-1928.
5. Financial Summary, showing operations in 1928.

General Meeting of the Three Groups

The General Meeting, attended by members of the three Groups, was held Thursday afternoon, July 18, John J. Brossard, of the

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Recent ▸▸▸

◂◂ Bulletins

We have recently issued the following catalog bulletins and would like to send you those in which you are interested. They are worthy of a place in your reference files. The cost of these bulletins renders general distribution impractical, but if you will fill in the coupon below or write us, we will gladly forward the ones desired.

102—CYLINDER MACHINES
A picture story of our latest developments in Cylinder Machines.

103—SUCTION ROLLS
Detailed description of the construction and operating advantages of the Kilberry Patent Suction Roll.

113—BEATING ENGINES
Complete description of our High Speed Beaters and standard Holland Beaters and Bandless Beater Rolls.

114—PUMPS
Description, Dimensions and Capacities of our Triplex and Duplex Stuff Pumps and Centrifugal Pumps. Also general pumping information.

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Send me the following bulletins, without obligating me in any way. ☐ 102 ☐ 103 ☐ 113 ☐ 114

Mr._____

Title_____

Company_____

Street_____

City and State_____

Fort Wayne Corrugated Paper Company, the president of the Association, presiding.

President Brossard Reports

President Brossard submitted a comprehensive report, covering subjects considered and action taken by the Executive Committee, which had met at Rye, N. Y., July 16th. The Executive Committee's report covered the following major items:

1. Finances.
2. The suggestion that from time to time arrangements be made for prominent speakers to address Association meetings.
3. Cooperation with manufacturers of related products, etc.

The complete report of the Executive Committee is included in the minutes of the meeting.

Sales Promotion Committee's Report

Chairman J. M. Arndt, of Robert Gaylord, Inc., St. Louis, Mo., submitted the report of the Sales Promotion Committee. He stated that the Committee's report for July, 106 pages, with illustrations, was being mailed to the membership. Chairman Arndt urged that members be careful to observe to the letter the specifications for containers, as included in the Committee's reports, pointing out that whenever boxes of less strength than recommended are used, the shipments do not carry satisfactorily, and that this situation has a tendency to nullify, to an extent at least, the efforts put forth to increase the use of corrugated and solid fiber containers in these new fields.

Chairman Arndt introduced A. W. Luhrs, Sales Promotion representative, and the latter reported upon the work carried on by the Sales Promotion Department during the past sixty days.

Next Meeting

The next meeting of the Association will be held in Chicago on September 18 and 19.

Trade Practice Administration

Members of the Three Industry Committees (Paperboard, Container and Folding Box) and members of the Board of Directors of the Trade Practice Administration met at the Westchester Biltmore Country Club, Rye, N. Y., Tuesday, July 16, in an open forum meeting. The recommendations of the open forum meeting were duly presented to a meeting of the entire Paperboard, Container and Folding Box Industry, held at Rye, N. Y., Thursday, July 18th.

Hon. Abram F. Myers of Washington, D. C., former chairman of the Federal Trade Commission, addressed the Industry Meeting on Thursday, July 18, outlining in a splendid manner just how the Trade Practice Rules are being administered in other industries. His remarks were received with interest and enthusiasm and they will probably be published in the next issue of this magazine.

Report was made that in addition to the members of the Paperboard Industries Association (158 in number) 14 additional companies, which are not members of said association, have enrolled in support of the Trade Practice Administration.

Report on Container Inspection Service

General Manager Browder reported in detail covering the results of the test of sample boxes collected from shippers during May and June 1929. The report showed a substantial improvement in the quality of boxes tested, as compared with boxes collected and tested in the past. As a result of this work,details regarding boxes which do not meet the certified standard, are reported to the box user and this activity is steadily raising the quality standards of the container industry.

The general manager also reported upon three instances in which informal complaints were made against certain practices on the part of box makers, which practices were investigated and found to constitute misbranding. In each instance, the handling of the subject direct with the box maker complained against resulted in the immediate discontinuance of the practice and assurance was given in each case that the offense would not be repeated.

Staff Activities

Report was made that Irwin W. McLean, educational director, had called upon a number of companies during the past two months, explaining the trade practice rules and endeavoring to enlist the aid of these companies in connection with the general administration of the plan.

The meeting voted to request the Federal Trade Commission to place the above rule in Group 1 of the rules approved for the paperboard industries, and since the meeting assurance has been received from the Commmission to the effect that this will be done.

Agreement With the Federal Trade Commission

Report was submitted at the meeting showing progress made in securing signatures to the agreement with the Federal Trade Commimssion. The discussion at the meeting indicated that while everyone present seemed to be strictly in accord with the principles laid down in all of the rules, there was an apparent hesitation on the part of some companies in signing the agreement to accept all of the rules until advice could be had as to what other commpanies are doing in the matter of accepting the rules. The principal objection was with regard to Group 2 Rule 12 (Sales without Mutuality) and to Group 2 Rule 13 (Dumping in Remote Markets).

To expedite matters, and in the interest of harmony, it was considered best that advice be secured from the Federal Trade Commission as to whether the Commission will accept agreements, wherein a member of the industry accepts the Group 1 Rules and as many of the Group 2 Rules as he desired to accept, making reservation with regard to non-acceptance of one or more of the Group 2 rules. Since the meeting advice has been secured from the Commission to the effect that agreements with stipulated reservations will be accepted and it is believed that with this assurance practically every company in the industry will sign the agreement without further delay.

The Trade Practice Administration has sent copy of a *revised* acceptance form to each company in the industry, with the request that the signed agreement be returned to the office of the Trade Practice Administration, Paperboard, Container and Folding Box Industries, 608 South Dearborn St., Chicago, Ill., the signed agreements to be held by the Administration until the next meeting of the industry, which will be held in Chicago on September 19, 1929.

J. P. Brunt, Chairman of the Board of Directors, Trade Practice Administration, has sent a general letter to the entire industry reporting upon the action taken at the July 18th meeting, and giving a resumé of developments since that time. The following paragraphs are quoted from Chairman Brunt's letter of August 6th addressed to the industry:

> "Faster progress in taking advantage of the benefits available through our trade practice conference is now possible on account of the modifications outlined in this letter, and the way is now open for signatures from 100% of the industry.
>
> "We earnestly urge you to take advantage of the opportunity offered through the administration of these rules to eliminate the unethical practices which are demoralizing and impoverishing our industry at the present time."

Any company which has not signed the agreement or which may desire information with regard to the Trade Practice Administration is requested to communicate with the office of the Trade Practice Administration, 608 South Dearborn Street (Room 2233) Chicago, Ill.

Sefton Mfg. Co. Busy

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., August 12, 1929.—John Hyde, manager of the Sefton Manufacturing plant at Anderson, Ind., manufacturers of paper and cardboard cartons and boxes, states that the factory is exceptionally busy at the present time and a night force has been working in some departments.

MOUNT TOM

STANDS FOR THE BEST THERE IS IN

Bleached Sulphite

"THE BEST IS THE CHEAPEST IN THE LONG RUN"

SHALL WE SEND YOU SAMPLES?

Pagel Horton and Co. Inc.

347 Madison Ave., New York City

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Tuscaloosa, Ala.—The Champion Fibre Company, Canton, N. C., affiliated with the Champion Coated Paper Company, Hamilton, Ohio, has closed arrangements for the purchase of a tract of about 250 acres of land at Fox, approximately 6 miles from Tuscaloosa, on the Warrior River, and is said to be planning the construction of a new mill at that place for the manufacture of kraft paper stocks. The site was abandoned a number of years ago by the Henderson Lumber Company, and is said to be present an ideal location for proposed mill. The project will consist of a number of units, with machine shop, boiler plant and miscellaneous mechanical structures and is reported to cost close to $4,000,000 with machinery. It is understood that work is scheduled to begin in the fall. The company will establish a housing development for operatives at the plant, and will likely salvage a number of dwellings formerly used by the Henderson company for the same purpose. The initial working force will approximate more than 200 operatives.

Charlestown, Mass.—The North Shore Fibre Company, Inc., Rutherford avenue, is considering the early rebuilding of the portion of its plant recently destroyed by fire with loss reported in excess of $40,000, including equipment.

Ashland, Wis.—The Marathon Paper Mills Company, Ashland Division, has awarded a general contract to Tomlinson & Egan, 404 Prentice avenue, Ashland, for extensions and improvements in local mill, including new settling basin, filter plant and other work, reported to cost about $50,000, with equipment. Work will be placed under way at once.

Monroe, La.—The Brown Paper Mill Company, Monroe, has awarded a general contract to the Morton C. Tuttle Company, 31 St. James avenue, Boston, Mass., for the erection of proposed new additions to plant to double approximately the present output. The contract calls for the construction of a group of ten buildings, expanding practically every department of the mill, which is devoted to the production of kraft paper and kraft paper board. The entire program will develop a rating for the plant of 350 tons per day. Two new paper-making machines are scheduled for installation. The development is estimated to cost close to $5,000,000 with machinery. George F. Hardy, 309 Broadway, New York, is consulting engineer.

Richmond, Va.—The Standard Paper Manufacturing Company, Richmond, has begun the construction of a new addition to its mill, for which general contract recently was let to Allen J. Saville, Inc., Electric Building, Richmond. New unit will be three story, brick, 55x140 feet, and will be equipped primarily as a beater room. It is reported to cost close to $60,000, with equipment. Lee, Smith & Van Dervoort, Engineers Building, are architects. J. F. Ryland is vice-president and general manager.

Fitchburg, Mass.—The Fitchburg Paper Bag Company, North street, is said to be planning early rebuilding of portion of plant, destroyed by fire August 4, with loss reported at close to $12,000, including equipment.

Lambertville, N. J.—The property of the Mann Paper Mills, Inc., a holding of the William Mann Company, Philadelphia, Pa., is scheduled for early public sheriff's sale. The plant has been inactive for a number of months, and it is understood will be acquired by a group of interests which will reopen in the near future. There are a number of creditor's claims against the property and the financial difficulties are in the Court of Chancery.

Phoenix, N. Y.—The John H. Hollingsworth Paper Corporation, recently organized with capital of 1,000 shares of stock no par value, is reported planning the early operation of a paper mill in this vicinity. It is understood that the new organization is headed by J. H. Hollingsworth, mill superintendent at the plant of the Oswego Falls Corporation, Fulton, N. Y., with individual address given in incorporation papers as 351 Highland street, Fulton.

Fredericksburg, Va.—The Sylvania Industrial Corporation, 122 East 42nd street, New York, recently organized with capital of $3,500,000, has taken over a tract of about 200 acres of land on the Rappahannock River, near Fredericksburg, Va., and will use a portion of property for the construction of a new mill for the manufacture of transparent papers and other processed stocks. The initial plant will consist of a group of one-story buildings with steam power house, machine shop and auxiliary mechanical structures, and will be equipped to give employment to more than 400 operatives. It is estimated to cost clost to $1,000,000, with machinery. It is understood that plans will be prepared at once and work begun early in the fall. Rodger N. Wallach is president, and Dr. Frank H. Reichel, general manager.

Holyoke, Mass.—The Holyoke Water Power Company has plans maturing for a proposed hydroelectric generating plant on its waterway near the mill of the American Writing Paper Company, reported to cost about $450,000, with equipment, and it is understood that work will be placed in progress at an early date.

Port Angeles, Wash.—The Olympic Products Company, recently organized by interests connected with the Grays Harbor Pulp and Paper Company, Hoquiam, Wash., and J. D. Zellerbach, head of the Washington Pulp & Paper Corporation, and the Fibreboard Products, Inc., both with mills at Port Angeles, has plans nearing completion for its proposed local mill on the waterfront for the manufacture of wall board and insulating board products, the beginning of the project is contingent upon securing a water supply from the city approximating 25,000,000 gallons per day, and developments are under way to that end. The plant will be of combination type, including saw mill, pulp mill, and finished stock division, and is reported to cost more than $750,000, with machinery.

Chillicothe, Ohio—The proposed new mill unit of the Mead Pulp and Paper Company, referred to in these columns last week, will be devoted to the production of straw pulp, and it is understood will be operated by a recently organized subsidiary of the company noted, known as the Mead Strawpulp Company, chartered with a capital of 10,000 shares of stock no par value. The new plant is reported to cost approximately $400,000, with equipment.

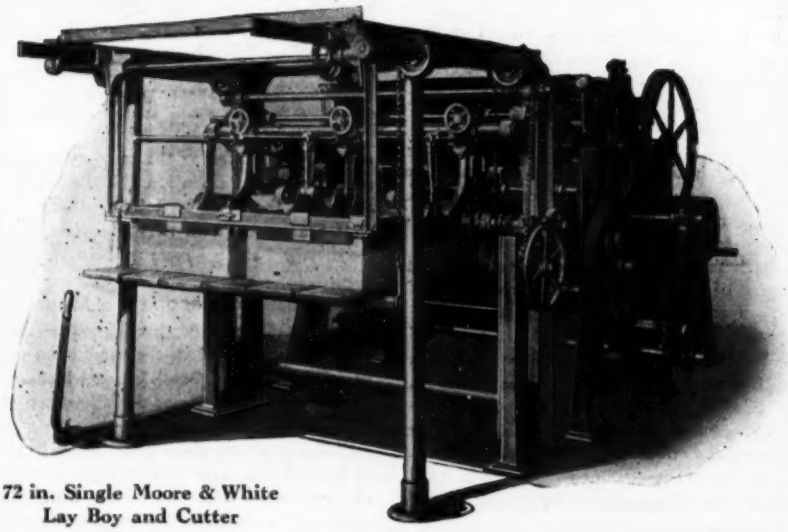
Hamilton, Ohio—The Champion Coated Paper Company

"M & W" Lay Boys

Over 1000 "M & W" Lay Boys for laying all kinds of paper, are in operation in connection with all makes of Cutters in finishing rooms or on end of paper machines. By the use of a Lay Boy the cutting expense is reduced considerably as these machines will increase the output of any Cutter.

One operator can handle any number of piles and in some cases one operator runs two or more Cutters, as their operation is automatically controlled.

The space required for the Lay Boy is no more than for the table formerly used in connection with Cutters. Wax and Glazed and Curly Papers successfully handled. Lay Boys can be had for Single, Duplex or Diagonal Cutters.



72 in. Single Moore & White Lay Boy and Cutter

. . . ADVANTAGES

Increased Production—Operates Automatically—Paper Piled Straighter—Saves Labor and Finished Paper—Can be attached to any make of Cutter—Present Trucks can be utilized.

Makes the use of Wide Cutters desirable at High Speed operation—A Trial will convince you—Trial orders accepted—Literature upon request.

THE MOORE & WHITE CO., NORTH PHILA. STATION PHILADELPHIA, PA.

PAPER · MACHINE · BUILDERS

has awarded a general contract to the F. K. Vaughn Building Company, Lowell street, Hamilton, for the construction of new addition to mill reported to cost close to $40,000, with equipment. Work will be placed under way at once.

Millis, Mass.—The Safepack Mills, Inc., manufacturer of special wrapping papers, is running on a full time production schedule, with employment of regular working force, and is said to have secured orders to insure this basis of output for some months to come.

Los Angeles, Cal.—The Bates Valve Bag Company, 35 East Wacker drive, Chicago, Ill., and 2,001 East 57th street, Los Angeles, will proceed with the construction of its proposed new plant at last noted place, at Medford and Miller avenues, consisting of main one-story unit, 170x360 feet, to cost approximately 100,000, with equipment. It is understood that the mill is scheduled to be ready for service in the fall. The Austin Company of California, 777 East Washington street, Los Angeles, is engineer in charge.

Skoghall, Sweden—The Uddeholm Company, Stockholm, Sweden, is projecting plans for the early construction of a new mill at Skoghall, for the manufacture of kraft papers. It will be equipped for an initial output of close to 1,600 tons a month, and is reported to be part of a general expansion program of the company to include an addition to its electro-chemical works in this same vicinity. The entire project is reported to cost close to $1,000,000, including equipment.

New Companies, Etc.

Buffalo, N. Y.—The Buffalo Paper Stock Company, Inc., has been incorporated with capital of $25,000, to manufacture and deal in paper stocks, etc. The company is headed by Jacob Rivkin and D. Feinsinger, 1,220 Rand Building, Buffalo. It is represented by Maurice Yellen, Rand Building, Buffalo, attorney.

Paterson, N. J.—Commercial Stationery, Inc., has been incorporated with capital of 2,500 shares of stock, no par value, to manufacture and deal in stationery products and other paper goods. The company is headed by Harry Bender and Herman and Morris Feigelman, 72 Hamilton avenue, Paterson.

St. Louis, Mo.—The Orchard Paper Company, Chouteau and 12th streets, has filed notice of increase in capital from $400,000 to $500,000, for general expansion in operations. Herman C. Orchard heads the company.

New York, N. Y.—The Louden Paper Specialty Company has been incorporated with capital of $5,000, to manufacture and deal in paper products. The incorporators are Louis C. Denis, Clarence J. Lauer and Waldemar Timme, 350 Madison avenue, New York. Last noted is representative.

Birthday Dinner for President Willson

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., August 13, 1929.—Incident to the annual golf tournament of the American Writing Paper Company officials and office force at the Mt. Tom Golf Club last week, a birthday dinner was served at the club house in honor of Sidney L. Willson, president of the company, who was presented with a radio set. Russell S. Madden, sales director, who presided at the dinner, made the presentation speech and Mr. Willson responded happily. There were also informal addresses by Leon M. Yoerg, William R. Nickerson and John T. Wolohan. In the golf contest Russell S. Madden won low net and Ralph Burnett low gross.

Paper Making Machinery Patents Granted

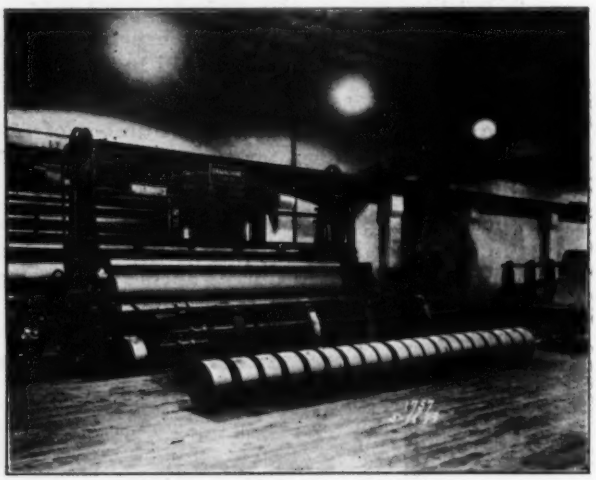
[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., August 10, 1929.—Patents on paper making machinery have been granted to Harold D. Wells, of Glens Falls, and George S. Witham, of this place, by the United States patent department. Mr. Wells is the inventor of a pulp screen on which he applied for patent January 13, 1928, on which a number of patentable features have been recognized, while Mr. Witham is the inventor of a stock extractor. He applied for patent on April 28, 1927.

Install Huge Camachine at Tuscaloosa

The Gulf States Paper Corporation at Tuscaloosa, Ala., recently completed the installation of a large Camachine 20 Winder which is now being used in conjunction with a new kraft paper machine. This winder has a drum face of 226 inches and winds rolls up to 60 inches in diameter, which is one of the largest machines of this type in use.

In submitting specifications for this new equipment, a Camachine



INSTALLATION AT TUSCALOOSA, ALA.

Camachine Type 20 Winder at the mill of the Gulf States Paper Corp. This winder has a 226-inch drum face and rewind diameter of 60 inches.

winder was chosen as the only special part of this new and entire paper making installation. The accompanying photograph shows a view of the new Camachine winder in the finishing room at the Gulf States mill with twenty clean-cut and evenly wound rolls of kraft paper which have just been taken off the winder.

Donnacona To Make Wallboard

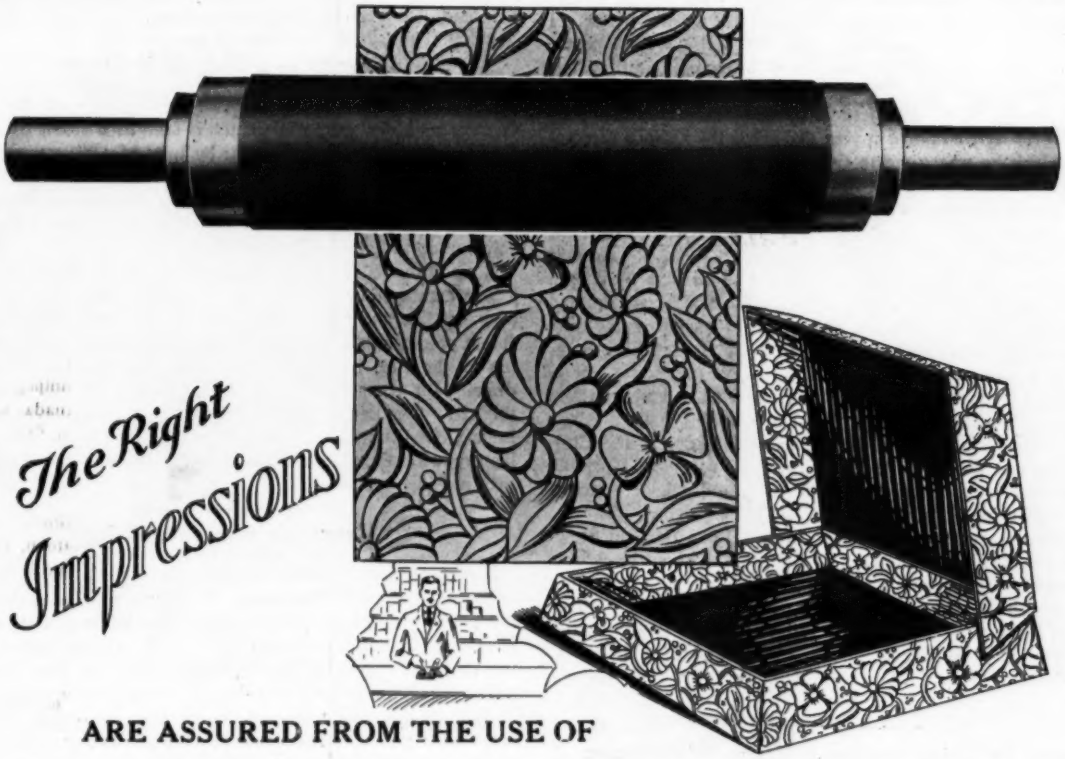
MONTREAL, Que., August 12, 1929.—The Donnacona Paper Company will shortly begin the production of wall board, according to an official of Price Bros. & Co., which controls the company. Production is to commence this fall with a plant having a capacity of 150,000 square feet per day.

Wall board is a wood fiber product, which utilizes wood screenings which are a by-product in paper manufacture. There is also another by-product, wood-flour, which has a value in the manufacture of explosives, composition floors, and as an insulator.

Not long ago, the International Paper Co. took over a plant at Midland, Ont., manufacturing a certain brand of wall board, and they have now constructed a new wall board plant at Gatineau, P. Q., with over eight acres of floor space and an ultimate production capacity of 600,000 square feet of board per day.

Oswegatchie May Change Over From News Print

GOUVERNEUR, N. Y., August 10, 1929.—The Oswegatchie Paper Company has virtually completed negotiations for disposing of its entire output of kraft paper to the Coty Bag Corporation of Watertown. Tests are now being made of the product and it is understood that the mill will change over from news print immediately. It is claimed by officials of the Coty corporation that the firm desires to buy its kraft paper locally which would result in a saving on freight of several thousand dollars annually. The Coty corporation now secures its kraft from several sources, a large amount being received from the Gilman Paper Company in Massachusetts. Its white sulphite is also secured from several mills, the largest amount being supplied by the Dexter Sulphite, Pulp and Paper Company. It is expected that tests will be completed at the Oswegatchie mill within the next several days.



The Right Impressions

ARE ASSURED FROM THE USE OF

WALDRON PAPER EMBOSSING ROLLS

The advance from the comparatively simple to the more intricate designs that distinguish the popular modern box papers has demonstrated the importance of perfect synchronization of embossing rolls, the proper fill and hardness, with correct speed and pressure—where character of impression determines salability of embossed products. Only the care and precision used in the manufacture of Waldron Embossing Machines and Rolls can assure the quality of embossing that present day markets demand. Our Catalog No. 102 explains the engineering features that distinguish Waldron equipment and make it the choice of the leading converters in the industry.

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WALDRON

Paper Converting Machinery

Frank H. Wilson Dead

MONTREAL, Que., August 12, 1929.—A death has removed one of the leaders of the paper industry in Montreal, in the person of Frank Howard Wilson, president of J. C. Wilson, Ltd., papermakers, of this city. Mr. Wilson passed away on Saturday last at his summer home at Las Brule, St. Agatha, in the mountains north of Montreal. He had been in ill health for some time past and as a result retired about a year ago from the various directorates of which he was a member, although he did not sever connection with the paper and bag manufacturing company which was founded almost sixty years ago, and which bore his father's name.

Frank Howard Wilson was born in Montreal on June 14, 1873, the son of James Crocket and Jeanie Kilgour- Wilson. He was educated at the Montreal High School, and at the age of fifteen joined his father's company. When the business was incorporated in 1902, he was elected president and general manager, succeeding his father, and held the position until ill-health forced him to relinquish an active part.

During the course of his active career he was at various times Governor of McGill University, president of the Montreal Arena Company, Governor of the Montreal General Hospital, the Children's Memorial Hospital, and the Verdun Protestant Hospital, and a member of the Art Association of Montreal. He was a member of Erskine Presbyterian, now United Church.

Mr. Wilson married, on December 1, 1904, Eliza Graham Stewart, daughter of William Stewart, of Montreal, who survives him. Other members of his family who survive him are two daughters, Mrs. Meredith D. Brown, and Miss Ruth G. Wilson, both of Montreal; his son, Frank Howard Wilson, also of this city; two sisters, Mrs. P. J. McIntosh, of New York, and Mrs. Edgar C. Budge, of Montreal, and a brother, Edwin H. Wilson, of Lachute, Que.

Pioneer in Drier Drainage Visits West Coast

Wm. B. Fulton, president and general manager of the Fulton Engineering Company, Inc., Middletown, Ohio, is visiting paper mills on the West Coast at the present time. Mr. Fulton is well known in the paper industry as a pioneer in drier drainage, having originated and developed the Fulton Forced Vapor Circulating System several years ago when he was chief engineer for large Ohio board mills.

From a small beginning with only two machines equipped, the company which he organized and heads has grown steadily until today it does not only a national but an international business and is probably the largest single organization devoting its entire time to paper machine drier drainage and general condensate elimination.

Only three years ago the company moved into a new shop and office building and is now enlarging the shop to twice its former size in order to take care of the rapidly increasing business, which includes the design and manufacture of complete drainage systems, steam traps, heat exchangers, liquid level controls and steam pressure regulators.

At some time or other Mr. Fulton has visited nearly every paper mill on the North American continent besides having traveled extensively in England and continental Europe so that a visit with him is always of particular interest to paper mill men.

Nationwide Air Express Service

A nationwide airplane express service which will deliver its consignments by motor truck direct from the landing fields, is being formed by the National Air Transport and the Curtiss-Wright group, two of the largest factors in the commercial air field, according to an announcement in the current *Sales Management* magazine. The Transcontinental Air Transport, a third major company, also is reported to be interested in the service.

The eventual aim of the air express service, it is explained, is to coordinate with the existing Railway Express Agency, Inc., using the ground facilities of the latter express offices and motor truck fleets—to receive its consignments, transport them to the field and deliver from plane to consignee.

Oswego as a Pulp Mill Center

[FROM OUR REGULAR CORRESPONDENT]

OSWEGO, N. Y., August 5, 1929.—Development of the Port of Oswego as a new pulp mill center is seen as a result of the New Welland Canal opening next year by John M. Gill, secretary of the Harbor and Dock Commission of that city. Mr. Gill sees important results following the opening of the new waterway which will be beneficial not only to this city but to the Barge Canal shipping and Hudson River terminals.

Already the movement of lumber from the Pacific Coast is serving to create midway points on the Great Lakes for the location of pulp mills and within the past two years two industries using forest products have been constructed in Oswego. With the opening of the Port of Albany pulp shipments can be brought here directly for trans-shipment by barge to the lake ports, including this city. The new Welland Canal admitting large lake vessels to Lake Ontario from the other Great Lakes for the first time in history will stimulate eastbound traffic through the Barge Canal in Mr. Gill's opinion.

Merger of Stationery Firms

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., August 12, 1929.—Several Winnipeg companies operating stationery businesses in Western Canada have been merged into a new corporation known as Willson Stationers and Envelope, Limited. The main company in the new organization is the Willson Stationery Company, incorporated in 1904, and carrying on a retail stationery and office equipment business with stores in Winnipeg, Brandon, Regina, Moose Jaw, Saskatoon, Edmonton, and Calgary. Other firms are: Winnipeg Envelope Limited, with an envelope manufacturing plant in Winnipeg; Silvester-Willson Company, which owns the five story building occupied by Willson Stationery in Winnipeg; Mitchell-Foley Limited, stationery and office equipment, Vancouver.

An issue of $400,000 seven per cent cumulative preference stock in the new company is now being offered by a Montreal financial house. The issue carries a bonus of five shares common with each ten shares of preferred.

H. H. Hall Retires

Harold H. Hall, New York manager for Arnold, Hoffman & Co., Inc., of Providence, since 1912, retires from business August 1, after 41 years with the concern and its predecessors. Mr. Hall entered the Boston office of the then firm of Mason, Chapin & Co. in 1888, and early acquired a taste for chlorine in handling the firm's importations of English bleaching powder at the Hoosac Tunnel Docks. Mr. and Mrs. Hall will divide the next few months between his old home at Buckfield, Maine, and their cottage on Penobscot Bay.

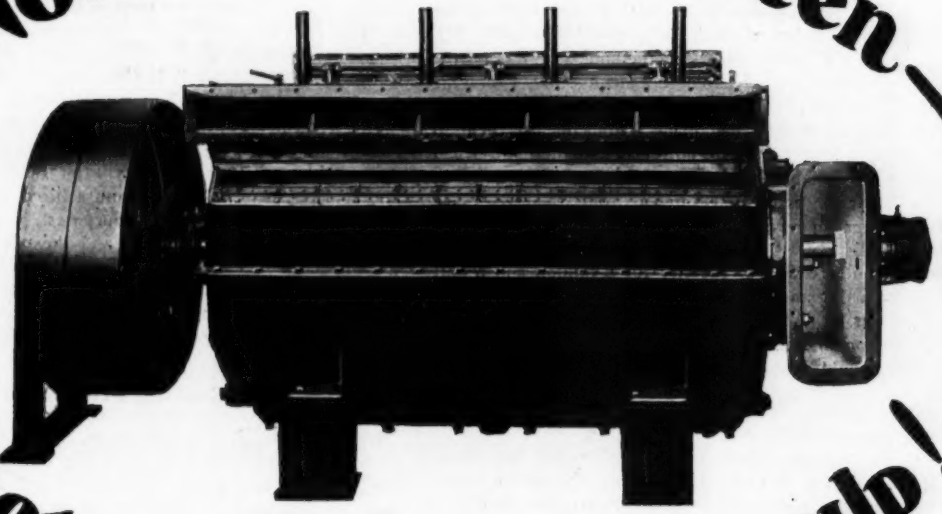
Charles L. Bernston succeeds Harold H. Hall as manager of the New York office of Arnold, Hoffman & Co., Inc., on August 1. Mr. Bernston is well known to the trade, having been active on the sales force of the company for a number of years. His former territory in New York and adjacent states has been taken over by Harold E. Becker, of Providence.

Monticello Mfg. Co. Incorporates

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., August 12, 1929.—Articles of incorporation have been filed with the Secretary of State in Indianapolis by the Monticello Manufacturing Company of Monticello, Ind. The corporation has an initial capital stock of 300 shares of $100 par value each and will make metal and paper products. The incorporators are Francis F. Melvin, Stephen L. Condon and Ruth Sparks.

Now—a Rotary Screen



that produces CLEAN pulp!

Never before has a rotary screen been capable of screening sulphite and sulphate pulp so *clean.* The degree to which this feature has been developed is an important achievement in the paper industry.

And—with the factor of cleanliness controlled—the other advantages automatically fall in line and make the new Valley-Thune Rotary Screen undisputably superior to other methods of pulp screening.

If cleaner pulp—elimination of overflow and wastage—lower maintenance cost—less power—much less space—and tripled screening capacity mean anything to you . . . .

The facts contained in our new Rotary Screen Bulletin will be very interesting to you. An inquiry will bring it to your desk.

Address the Valley Iron Works Company, Appleton, Wisconsin.

VALLEY

Equipment for Paper and Pulp Mills

New York Office: 350 Madison Avenue
Western Manufacturing & Sales Division: Smith & Valley Iron Works Co. Portland, Oregon

Construction of Willapa Paper Mills Assured

RAYMOND, Wash.,—Financial arrangements have been completed and work will go ahead soon to complete the construction of the Willapa Harbor pulp and paper mills at the Columbia box site between Raymond and South Bend, R. A. Swain, treasurer of the company, told city commissioners at a special meeting held at his request to settle the question of obtaining water for the plant.

Mr. Swain, who, with other officers of the company, was on the harbor for several days recently, told the commissioners that the reason work on the plant had gone ahead so slowly was that the condition of the bond market had made it difficult for them to dispose of their issue. He declared, however, that the market had improved; that a reputable bond house had interested itself in their issue, and that the underwriters awaited only final assurance as to electric power and water available to solve the last of the finance problems.

He made a definite request of the city for a million and a half gallons of water a day and asked for an option on an additional five million gallons.

In reply, the commissioners prepared a letter in which they stated that they would supply the million and a half gallons of water daily, piped as far as the city limits of Raymond, at a price of two cents per 100 cubic feet, with a lower rate on all used in excess of that amount.

Pursuant to an oral agreement made by Mr. Swain, the letter contained the stipulation that the pulp concern should purchase $25,000 of the $60,000 bonds deemed necessary to be issued by the city to obtain funds for the construction of the necessary pipe line.

The plan is to construct an 18-inch line from the South Fork pump station to the city limits, where the water would be delivered at low pressure. The pulp plant then would build to that point, taking the water there. The line would carry, if needed, more than three million gallons of water a day.

"In the dryest season we have any record of, we had a minimum of 13 million gallons of water available in the South Fork alone," F. E. Colkett, finance commissioner, said in relation to the request for water. "Usually in the summer that stream runs 15 to 18 million gallons daily. On the minimum basis, however, we could supply three million gallons daily to this plant, permit the regular city use to double, supply five million gallons to any plant that might locate within the city and still have water left."

The request of Mr. Swain for an option on five millions additional water daily was denied, however. In explaining that move Mr. Colkett said: "While the Willapa pulp and paper mills are not within the city limits, the City of Raymond is willing to do everything within its power to aid any industry on the harbor, and if it needs water from Raymond we will make every attempt to supply all it needs. We do not, however, intend to tie up our supply on option to any plant not yet completed and so jeopardize chances of bringing another pulp mill to the district, possibly within the city itself."

Previous to getting the statement on water from the city, Mr. Swain obtained a letter from J. R. Snider, manager of the Willapa Electric Company, now interesting itself in a mammoth power project on North River, assuring the company of an adequate supply of electric power at satisfactory rates.

Japan Imports More Paper

Imports of paper and paper products into Japan during the first four months of this year were valued at $4,917,200 as against $4,357,800 during the corresponding period of last year . The two leading items consisted of 5,339 tons of wrapping paper and 4,435 tons of printing papers of various kinds. Other important items were imitation parchment, and photographic papers, increases being registered chiefly in the last two products and in boards.

Imports of wood pulp for paper making into Japan during the first four months of this year totaled 36,931 short tons as against 29,177 tons during the corresponding period of last year.

Berkshire Paper Co. To Move

NORTH ADAMS, Mass., August 12, 1929—The machinery and equipment of the Berkshire Paper company, the re-organized branch of the former Berkshire Hills Paper company, will be moved from its present location at the old Stone mill in Maple Grove to the former Gagner silk mill on Dean street, now owned by Jesse Parrott. The paper company will use part of the ground floor for office space and the two upper stories to carry on its work. This change will become effective September 6, it was stated by Henry L. Harrington president of the company.

The Berkshire Paper company, which holds all rights to manufacture and sell paper formerly made by the Berkshire Hills Paper company, has been in its present location for about one year. The company has its paper manufactured outside and it is sent here for finishing and packing purposes.

Business has been consistent and the officials of the company are satisfied with its progress. The new building will allow much more space to carry on the required work, and, is an indication of the growth of the company since it was founded. All of the employees were formerly connected with the Berkshire Hills Paper company.

New Cooking Process for Pulp

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 14, 1929—Albert E. Nielson, a Norwegian engineer, has developed a new indirect cooking process for the manufacture of sulphite and sulphate pulp, which might be described as an improvement on the Mortenud process, according to a report from Commercial Attache Lund, at Oslo. It has been called the "Albenielsen" system, and has had a thorough trial at the plant of the Fladeby Cellulose Fabrik near Lillestrom, the results of which seem to justify the claims of the inventor that his new process shows a considerable saving in heat consumption, and also produces a pulp of excellent quality.

Oswegatchie May Make Kraft

The plant of the Oswegatchie Paper company located near Gouverneur may become a Kraft paper mill with the entire output used by the Coty Bag corporation of this city.

"It became known tonight" says the *Post-Standard* of Watertown in a recent issue, "negotiations are under way between the two companies whereby the making of Kraft paper will be tried out at the Oswegatchie plant and, if this is done, the Coty corporation will get the entire supply of the plant for its bag making here.

"The Oswegatchie company has been closed for several months. It was a newsprint mill. Work of changing over the mill to try out the making of Kraft is now in progress, it is stated, and it will be known within a week or 10 days, if this paper can be produced in a manner satisfactory to the Coty concern.

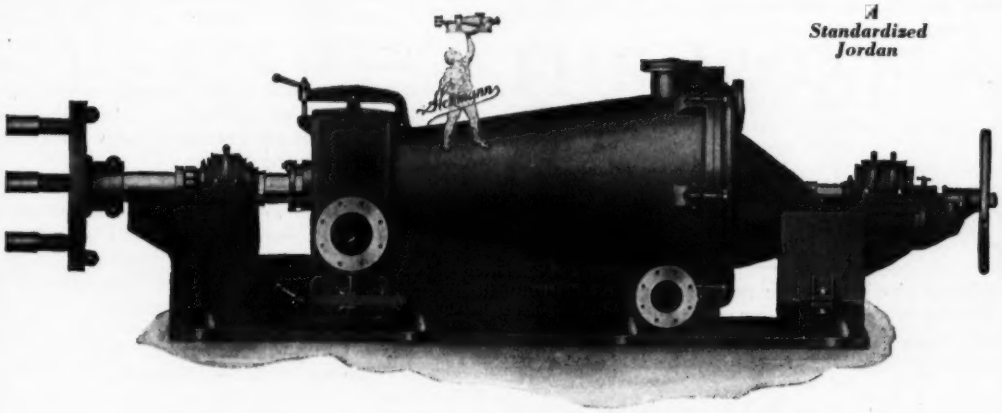
"It is said that ultimately the West End Paper company of Carthage, which is controlled by the same interests as the Oswegatchie, may make Kraft for the Coty concern."

Paper Mill Employment for June

There was an increase in employment in June over May in paper and pulp mills and paper box factories and a decrease in payrolls in these same plants, according to the Bureau of Labor Statistics, Department of Labor, at Washington.

Reports were received by the Bureau from 212 paper and pulp mills which gave their May employment at 58,827, increasing in June to 59,232, an increase of 0.7 per cent. The payrolls in these mills, on the other hand, decreased from $1,622,430 in May to $1,615,983 in June, a decrease of 0.4 per cent.

The Bureau also received reports from 185 paper box factories which gave their May employment at 19,203, increasing in June to 19,355, an increase of 0.8 per cent. The payrolls in these plants too decreased from $445,189 in May, to $442,368 in June, a decrease of 0.6 per cent.



Permanently Mounted *Roller Bearings* *An Exclusive Hercules Feature*

Fully Protected by Patents

BEING equipped with Timken Tapered Roller Bearings that do not have to be disassembled from the shaft when changing fillings or plug liners, the Hercules Jordan gives assurance of longer uninterrupted service with a very considerable saving in labor costs whenever changes are necessary.

FACTS

Plug liners changed with a saving of three to four hours.

Shell fillings changed with a saving of four to six hours.

Power saving from 20% to 30%.

Fast Becoming A Standard of Comparison

STUDENTS of the paper industry recognize a standard of principles in the Hercules Jordan by which careful comparisons may be made. This carefully engineered Jordan offers many advantages all exclusive innovations, with quality construction throughout.

Paper manufacturers who want the finest Jordan built;—plus the advantages of longer life;—less frequent re-filling;— with a substantial saving in power;— will naturally specify the Hercules for their new equipment.

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Canada
Watrous, Ltd.
Brantford, Ontario

Pacific States
A. H. Cox & Co., Inc.
Seattle, Washington

THE HERMANN MANUFACTURING CO.

LANCASTER, OHIO

New York Trade Jottings

Frank E. Dunaway, well known in the paper industry, has accepted a position with Parsons & Whittemore, Inc., of 10 East 40th street, New York, in their pulp department.

* * *

Thomas E. Noakes, who formerly covered the eastern territory for the Beaver Pulp and Paper Company, has joined the sales forces of the Perkins Goodwin Company, of 551 Fifth Avenue.

* * *

Walter Hicks, of Daniel M. Hicks, Inc., dealers in paper mill supplies, of 200 Fifth Avenue, New York, has returned to duty after spending an enjoyable vacation at his summer home on Shelter Island.

* * *

Edward Dickson, who has for the past two years been associated with Parsons & Whittemore, Inc., of 10 East 40th street New York, has resigned to accept a position with the Goteborg Bank, Gothenburg, Sweden. He will sail later in the month.

* * *

The Texas Gulf Sulphur Company, New York, has declared regular quarterly dividend of $1, payable September 16 to stock of record September 2. The company states stockholders will be advised later as to what portion of this distribution is from free surplus and what from reserve for depletion.

* * *

Dr. E. C. Jahn, who recently received his medical degree under Professor Hibbert at McGill University, Montreal, Que., sailed last week aboard the *Kingsholm* for Sweden. For the coming year Dr. Jahn will be the TAPPI American-Scandinavian Fellow and will carry on research work at Holmens Bruks A/B Norrkoping, Sweden.

* * *

Encouraged by the reception of his book on Morocco, Paul E. Vernon declares that his English publishers are at work on another book to be called "From Coast to Coast by Motor." It will contain eight illustrations in color, and a map. So many friends were interested in Mr. Vernon's trip that he wrote this account which will be circulated by William E. Rudge, of 475 Fifth avenue, New York, at $2.50 a copy.

* * *

In order to service more adequately the increasing demands from manufacturers on its package development department, the DuPont Cellophane Company of 2 Park avenue, New York, announces the addition of W. L. Hall to assist in creating and designing packages to help manufacturers market their products more successfully. The Cellulose Cap Division of the Du Pont Cellophane Company announces the addition of A. E. Gunnell to the sales force. He will cover a Manhattan territory.

* * *

The Harris & Paul Paper Company, 59 Bank street, New York, a partnership formed in 1927 between William Welton Harris and Herbert C. Paul, formerly vice-president of W. D. Harper Inc., and later with the Harper, Paper Company, has become a corporation under the name: "Harris & Paul Paper Company, Inc." The corporation has purchased the business of the partnership. The officers are: Herbert C. Paul, president and treasurer; Bushnell Merrill, vice-president; Bernard Levin, secretary. The capital stock of the new company consists of 100 shares of 6 per cent, cumulative preferred stock, par value $100, and 1000 shares of common stock, no par value.

Paper Production Gains in Soviet Union

WASHINGTON, D. C., August 14, 1929—Production by the mills of the Soviet Union during the last quarter of last year is reported to have reached 82,648 metric tons of paper and 11,995 tons of boards. The largest item was wrapping papers, which totaled 20,890 tons. Writing papers, amounting to 12,463 tons stood second in importance.

Weber Industrial Paper Corp. Buys Mill

The Weber Industrial Paper Corporation has purchased the mill of the Van de Carr Paper Company at Stockport, N. Y. The officers of the company are W. A. O. Weber, president, James B. Morris, vice-president, Fitzhugh C. Spear, treasurer, William Weber, Jr., secretary and manager, Max C. Weber, assistant secretary. The mill will make insulating papers. The Weber Industrial Paper Corporation some time ago bought the mill of the Setag Paper Mills, Inc., at Riverton, Conn., and W. A. O. Weber is also vice-president and general manager of the Munroe Paper Corporation at Lawrence, Mass.

The Gibbs-Brower Company, paper and pulp mill brokers, who represented E. H. Angier of the Angier Corporation, Framingham, Mass., in the sale of the Van de Carr mill, also were the brokers in the sale recently of the Oakland Division mill of the American Writing Paper Company at Manchester, Conn., to C. H. Dexter & Sons, Inc., Windsor Locks, Conn.

Changes in Jeffrey Mfg. Co.

The Jeffrey Manufacturing Company, Columbus, Ohio, announces that C. W. Miller has resigned as treasurer of the company, but will continue as a member of the Board of directors.

H. Supp, Jr., formerly credit manager, has been elected treasurer to succeed Mr. Miller. J. X. Farrar, formerly assistant purchasing agent, has been appointed credit manager succeeding Mr. Supp.

The Ohio Malleable Iron Company, Columbus, Ohio, a subsidiary of the Jeffrey Manufacturing Company, announces the election of W. A. Crieves as secretary, and H. Supp, Jr., as treasurer. Both men have similar positions with the Jeffrey Manufacturing Company. J. F. Davidson has been elected to the board of directors of the Ohio Malleable Iron Company.

To Represent Mid West Machine Co. on Coast

Jay Platt Hamerslag, 655 Russ Building, San Francisco, Cal. has been appointed Pacific Coast representative for the Mid-West Machine Company, Dayton, Ohio, manufacturer of Continuous Systems, Stock Extractors, Cylinder Washers, Lever Type Dump Valves, Falk Gear Reducers, High Speed Beaters, Bandless Type Rolls, Fly Bars, Bed Plates, Stuffed Chest and Agitators, Dayton Cog Belt Drive.

James Haaf Recovering From Injuries

FORT EDWARD, N. Y., August 10, 1929.—James Haaf, an employee of the International Paper Company, is recovering from injuries received at the plant during the past week when he suffered a fracture in a bone of his left foot. He was brought to the Glens Falls City Hospital by order of the company physician and it was learned that his condition was good. With other employees he was engaged in changing a roll on a machine in the mill when the shaft dropped, falling on his foot and crushing it.

Gummed Products Co. Joins Rice Leaders

TROY, Ohio, August 12, 1929.—The Gummed Products Company has received the signal recognition of being invited to join the Rice Leaders of the World Association. It has accepted the invitation to ally itself with a half hundred manufacturers who make up this association and are listed throughout the length and breadth of the land as "fine people to deal with." The emblem of the association will henceforth appear on all its stationery, advertising literature and about its plant and offices as an incentive to uphold and strengthen the reputation which brought it this evidence of high standing.

Paper Imports Into Japan

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C. August 14, 1929—Imports of paper and paper products into Japan, exclusive of printed matter, during the five months ended May 31, were valued at $5,608,653 as against $6,039,545 during the corresponding period of last year.

HERCULES—THE PIONEER

The Hercules Powder Company made the first purified Wood Rosin and holds the controlling patents for the process. We made the first limed Wood Rosin for sale as a Naval Stores product, led in the shipment of Wood Rosin in tank cars, and were the originators of the application of Wood Rosin to Paper Size.

This company in cooperation with its customers, has not only been first in these, but led in adopting Wood Rosin to Foundry Cores, in developing Commercial Abietic Acid for high tension cable insulation, and in developing Hercules Wood Rosins to meet the specific demands of specialized industry.

Manufacturers who are purchasing Hercules Naval Stores and who are cooperating with this organization are in a preferred position to benefit by this research and development.

NAVAL STORES DEPARTMENT

HERCULES POWDER COMPANY

(INCORPORATED)

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BRANCH OFFICES:

Birmingham—American Trust Bldg.
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St. Louis—Railway Exchange Bldg.
Salt Lake City—617 Kearns Bldg.
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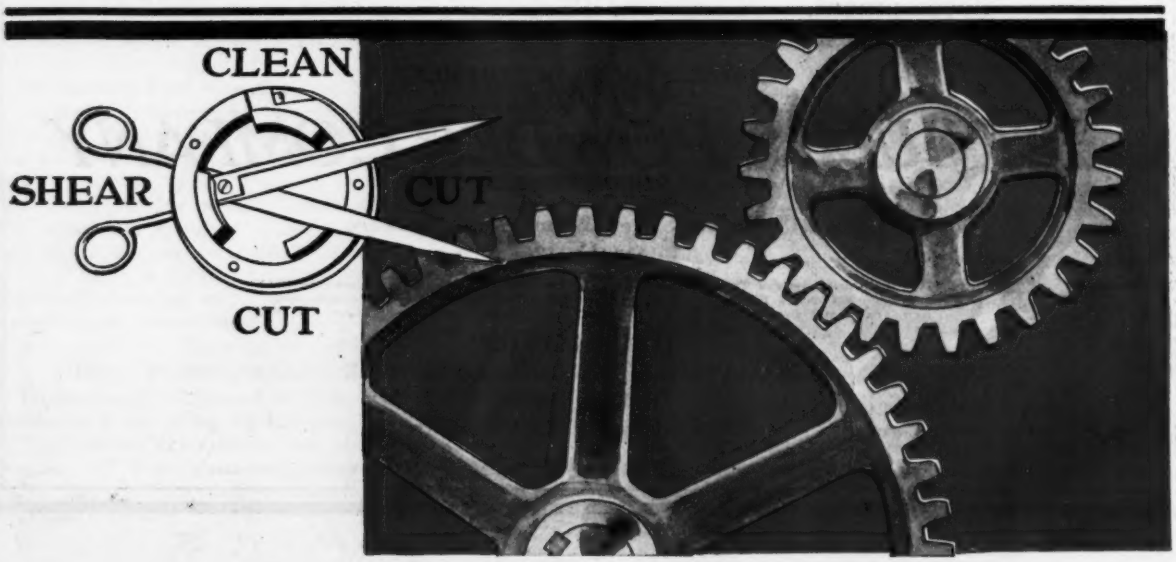
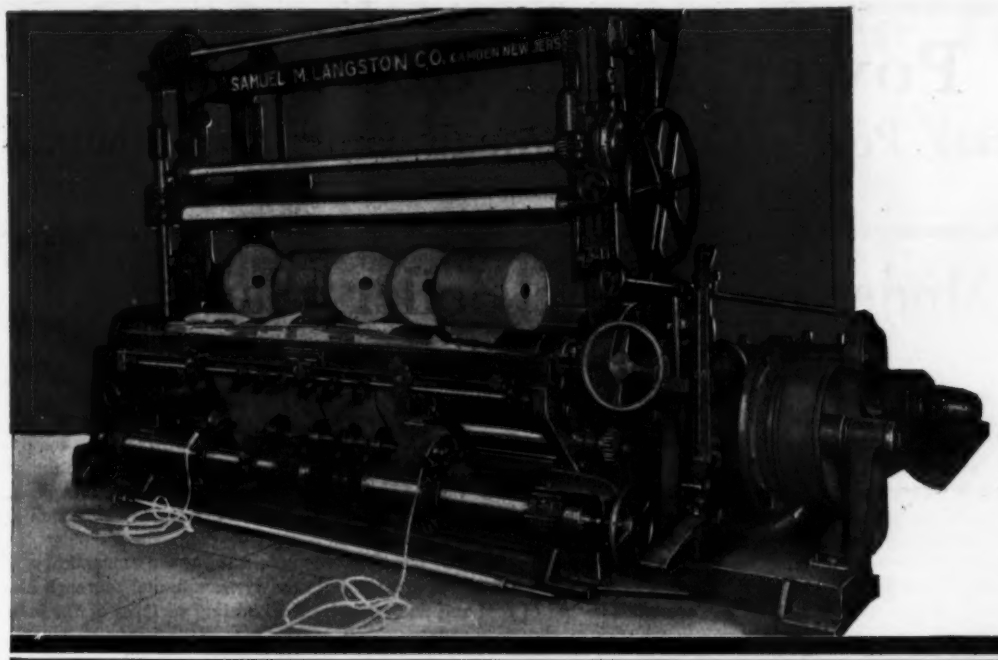
NITROCELLULOSE
STEAM-DISTILLED WOOD TURPENTINE
WOOD ROSIN
STEAM-DISTILLED PINE OIL

LANGSTON *Chrome Nickel-steel* GEARS

THERE are *no* cast-iron gears used anywhere on any Langston equipment. If we built our Slitters and Winders to sell at a *price*, we'd probably use cast-iron gears. But Langston Slitters are built to save you money in operation and production—not to save you a few dollars in the price of the machine. So every Langston Slitter has nothing but *chrome nickel, heat-treated steel gears*. They insure strength and wearing qualities at every vital point. They help Langston Slitters pile up twenty-five-year production records with extremely low repair and maintenance costs. There is a 92-inch Type DA Langston Slitter and Rewinder at the S. Austin Bicking Paper Manufacturing Company, Downingtown, Pa. Nearly ten years old, this machine has a record of less than $25 per year for repairs! So well did it perform, another Langston was purchased about three years ago, and in its first





eighteen months of operation had only $10 in repairs. Mr. F. S. Bicking, treasurer of the company, further says, "Good slitting and winding is characteristic of machines using the Shear-Cut principle, and both Langston machines have given complete satisfaction in this respect. Rewound rolls are invariably square-edged, firmly wound and free from dust. Buyers of the paper uniformly demand such rolls, and it is significant that there have been almost no complaints on this ground." If you are interested in bettering the quality of your finished product, lowering your production and maintenance costs—let us show you what Langston Slitters and Winders can do for you.

SAMUEL M. LANGSTON COMPANY, CAMDEN, NEW JERSEY

LANGSTON SLITTERS

Power Plant Section

Reducing Power Costs Through Unit Treatments

Conducted by Reginald Trautschold, Consulting Engineer

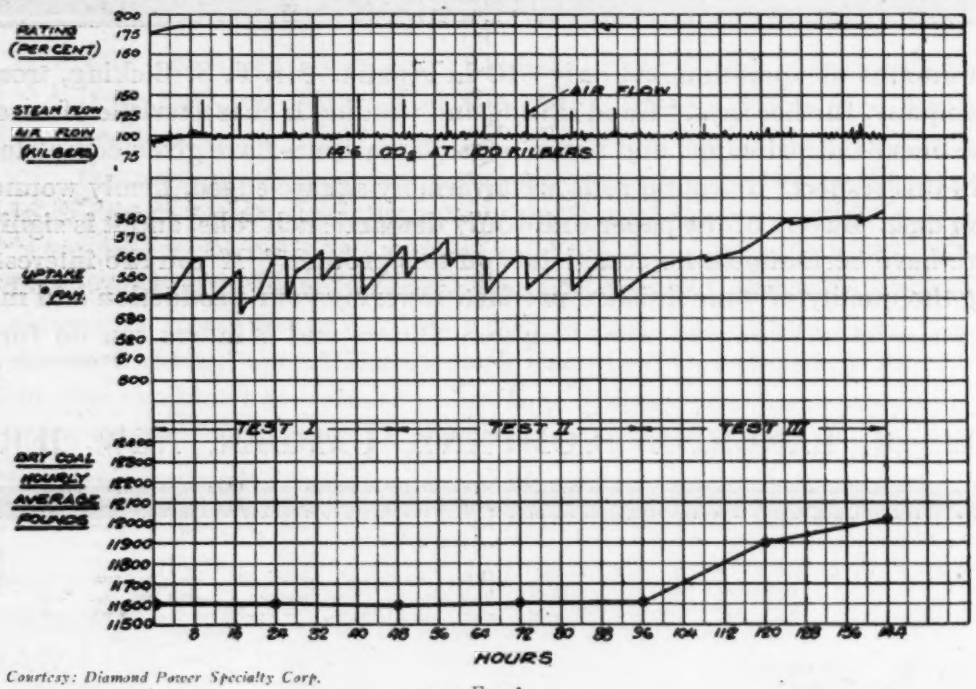
Modernizing The Boiler Plant

Mechanical Soot Blower Installations

Dirty boilers, with soot without and scale within, are held responsible for up to 25 per cent of the fuel waste in power plant operation by the Department of the Interior, and much of the larger proportion of this is occasioned by the accumulation of soot on boiler tubes and heating surfaces, also upon the baffles where it interferes with head radiation to the tubes. In many instances, the wastage of good fuel is even more pronounced, for soot as it is formed and settles upon all the tubes, passages and heating surfaces about the boiler is one of the most effective insulations against heat conduction known, being excelled in this respect by only loose wool and live geese feathers. In fact, soot, or loose lamp black, has five times the heat-resisting power of asbestos.

A coating of soot only 1/32 inch in thickness will decrease the boiler efficiency 9.5 per cent; a coating 1/16 inch thick, 26.2 per cent; one ⅛ inch thick, 45.2 per cent; and if the soot is allowed to accumulated to a thickness of only a little over 3/16 inch virtually no heat can penetrate to the boiler content, since the loss in heat conductivity of boiler plate due to a soot deposit 3/16 inch in thickness is very close to 70 per cent. In addition to the costly decrease in heat transfer occasioned by the accumulation of soot on heating surfaces, the deposits seriously aggravate draft losses and the resulting bottling up of the heat in the furnace, since the transfer of heat to the boiler contents is seriously impeded and the draft effective in ridding the furnace of the combustion gases is interfered with, causes high maintenance expenses in connection with the upkeep of furnace linings, etc.

Hence, one of the major requirements for the economical operation of steam power plants is the systematic and thorough cleaning of soot and fine ashes from all heating surfaces of the boilers.



Courtesy: Diamond Power Specialty Corp.

FIG. 1.

Test Records of Soot Blower Efficiencies 1,800 horsepower boiler.

Effective cleaning, obviously, is essential for the realization of satisfactory boiler efficiency and such cleaning must be consummated economically and without the imposition of dirty and arduous work.

It is quite a laborious task to erect platforms and insert the nozzle of a steam hose or lance into the several hundred staybolt holes necessary in both front and rear water legs of the modern water tube boiler, for instance, as is frequently entailed when depending upon the old hand method of boiler cleaning. Then the staybolt plugs must be replaced and the platforms removed. Any hand cleaning method is a time consuming task and wasteful in

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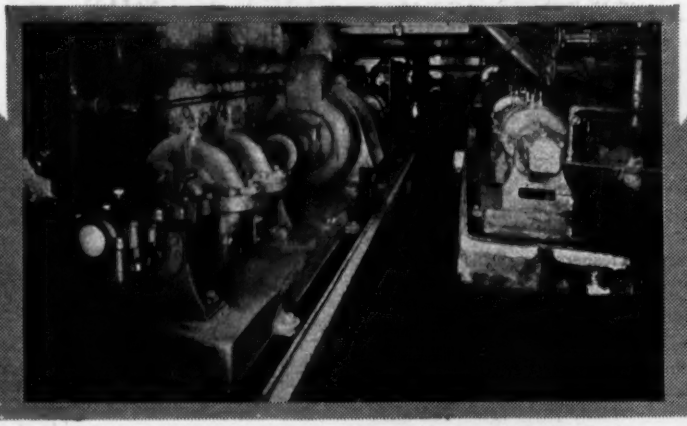

2 boiler feed units, each consists of two 4" two-stage, double suction pumps. The first pump takes water from heater, puts it through economizer to second pump which delivers it to the boilers.

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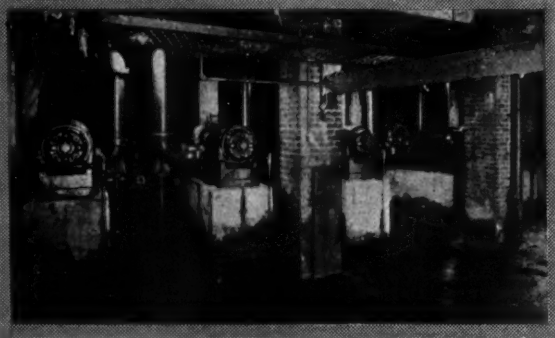

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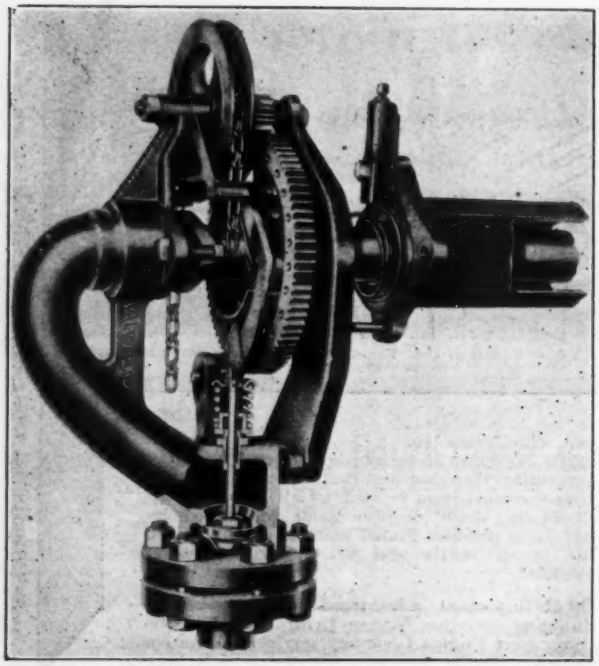
the use of steam, and the dirty work arouses the objections of the boiler room crew. The permanently installed, modern, mechanical soot blower system, however, works effectively, dislodging the soot and light ash, keeping the tubes and baffles clean and the draft clear, without entailing any dirty or heavy labor.

These mechanical soot blowers clean thoroughly in 3 or 5 minutes, if used regularly two or three times a day, consuming from 1 to 2 pounds of steam per rated boiler horsepower per cleaning. Working with hand lances and steam hose, on the other hand, takes from 30 to 60 minutes on the average, entailing the use of at least ten times as much steam per cleaning, and the cleaning cannot be as effectively consummated. The mechanical blower drives all the soot and fly-ash to the stack in a continuous and progressive manner, while with the steam hose or lance only a section of the heating surface can be cleaned at one time and when another section is blown, part of the soot and ash displaced is certain to lodge upon the section or sections just cleaned. It is a repetition of broom versus suction cleaner effectiveness of a far more costly nature.

Mechanical Soot Blowers

It is not the intention here to enlarge upon the construction of the various approved types of modern mechanical soot blowers or to feature systems of installation, but to confine the discussion to a few pertinent remarks concerning chiefly their value and place in modernizing the boiler plant. In the way of description, con-



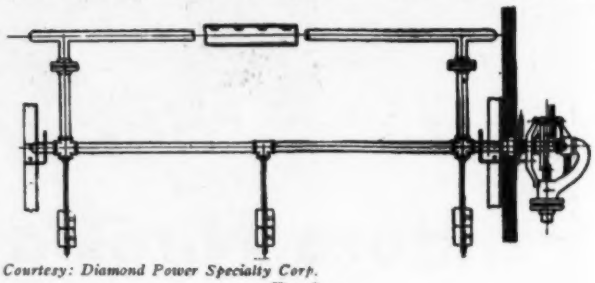
Courtesy: Diamond Power Specialty Corp.

FIG. 2.

Modern Automatic Valved Soot Blower Head.

sequently, it will suffice to say that in one typical variety of modern, permanently installed, soot blower system the nozzles, controlled by an automatic valved blower head, project powerful steam jets through the hollow stay-bolts of the water legs and that a complete system of this type ordinarily consists of two or three elements on the rear water leg and a couple of elements on the front. It is to these elements that the steam nozzles are attached, a steam supply pipe being connected to the top of the main steam header or other convenient source of steam.

An usual arrangement of elements in a number of series for a longitudinally baffled, three pass, boiler is for the main series of jets to enter a considerable number of the hollow stay-bolts in the rear water leg and blow iin the direction of the natural draft. Another series, arranged in a horizontal row, projects fom the front water leg at the top row of tubes and blows over the upper baffle in the direction of the draft, cleaning the drum and front end of the baffle. A lower series, in a horizontal row at the bottom of the front water leg blows over the top of the bottom baffle, agitating soot deposits in the first and second zones of such boilers, while a fourth series, also arranged in a horizontal row, blows through the rear water leg above the upper baffle, loosening the deposits in the final zone. With such an arrangement, the approved blowing schedule is to open the valves of the main series



Courtesy: Diamond Power Specialty Corp.

FIG 3.

Typical Swinging Arm Soot Blower Unit.

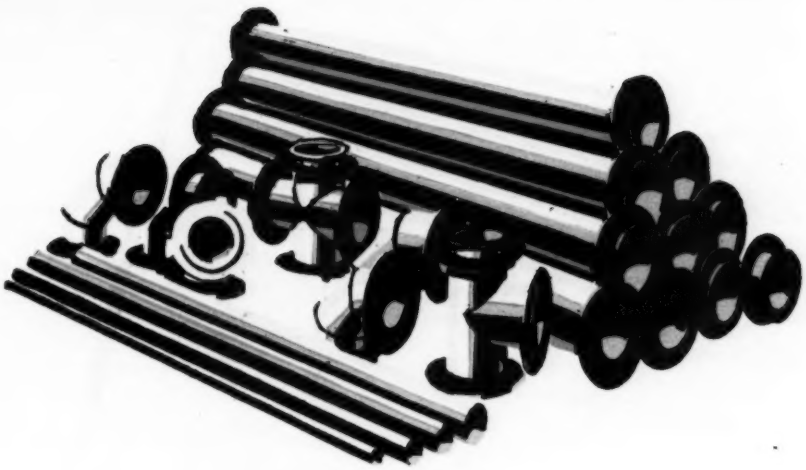
of elements and those of the series which blows over the upper baffle and allow them to blow with the draft for about a minute. Keeping these series blowing, the lower series directed over the top of the bottom baffle should be blown for half a minute or so, then shut-off and the series clearing the deposits in the final zone brought into play for a short blow. In this way, the average boiler of this construction can be thoroughly cleaned of soot in a few minutes.

This, of course, is only one arrangement of modern soot blowers, but it well illustrates the thoroughness and rapidity with which such approved cleaners function, whether of the fixed or swinging arm type constructions. Arrangements of elements have been evolved which effectively meet the requirements of virtually all standard varieties of boilers and such mechanical soot blowers have demonstrated their ability to save as much as a ton of coal out of every nine burned, a saving of 11 per cent in coal consumption alone, fully paying for themselves in savings realized within a few months and subsequently effecting returns often running as high as hundreds of per cent annually.

Cleaning Essential for High Boiler Efficiency

Their value in the maintenance of high boiler efficiency is well demonstrated by a series of tests conducted at one of the representative modern plants where a 1,800 horsepower, horizontal, water tube boiler of the cross drum type, served by an interdeck superheater, and fired with pulverized coal was driven at somewhat better than 175 per cent of rating for 144 consecutive hours, six full days, under as nearly identical operating conditions as could be maintained. During the first two days, the soot blowers with which the boiler was equipped were operated once every eight hours, during the second two days twice every eight hours and during the final two days it had been the intention to discontinue entirely the use of soot blowers. After sixteen hours without cleaning, however, the accumulation of soot in the first pass reached such a point that the blowers serving the lower deck had to be brought into operation. In fact, it was found necessary to operate these lower units three times during the last of the test runs, the final two days.

During the series of two day runs, the carbon dioxide content of the flue gases was maintained substantially constant at 14.6 per cent and the other pertinent conditions pertaining during the series of tests are shown plotted graphically on the accompanying chart. This depiction brings out the fact that the cleaning once every eight hours during the first two days was just about as effective



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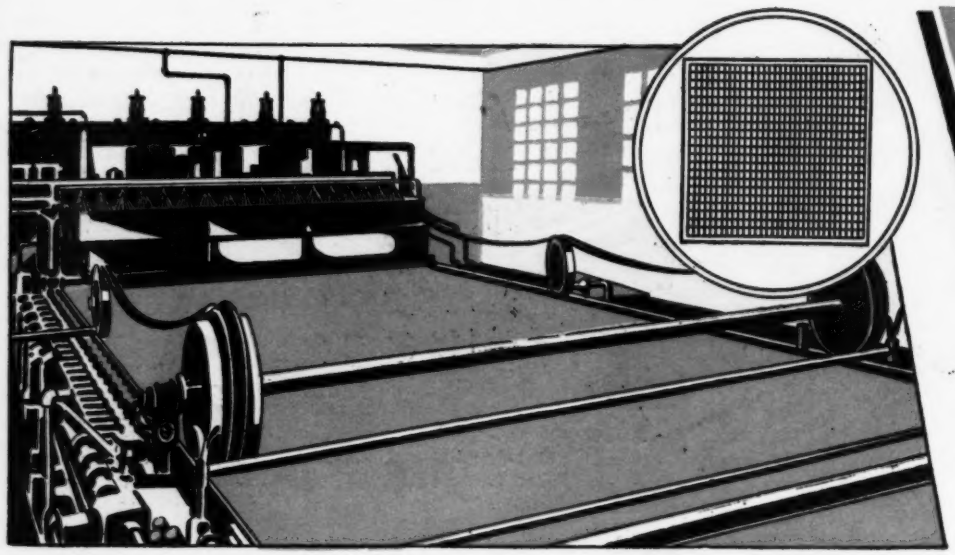

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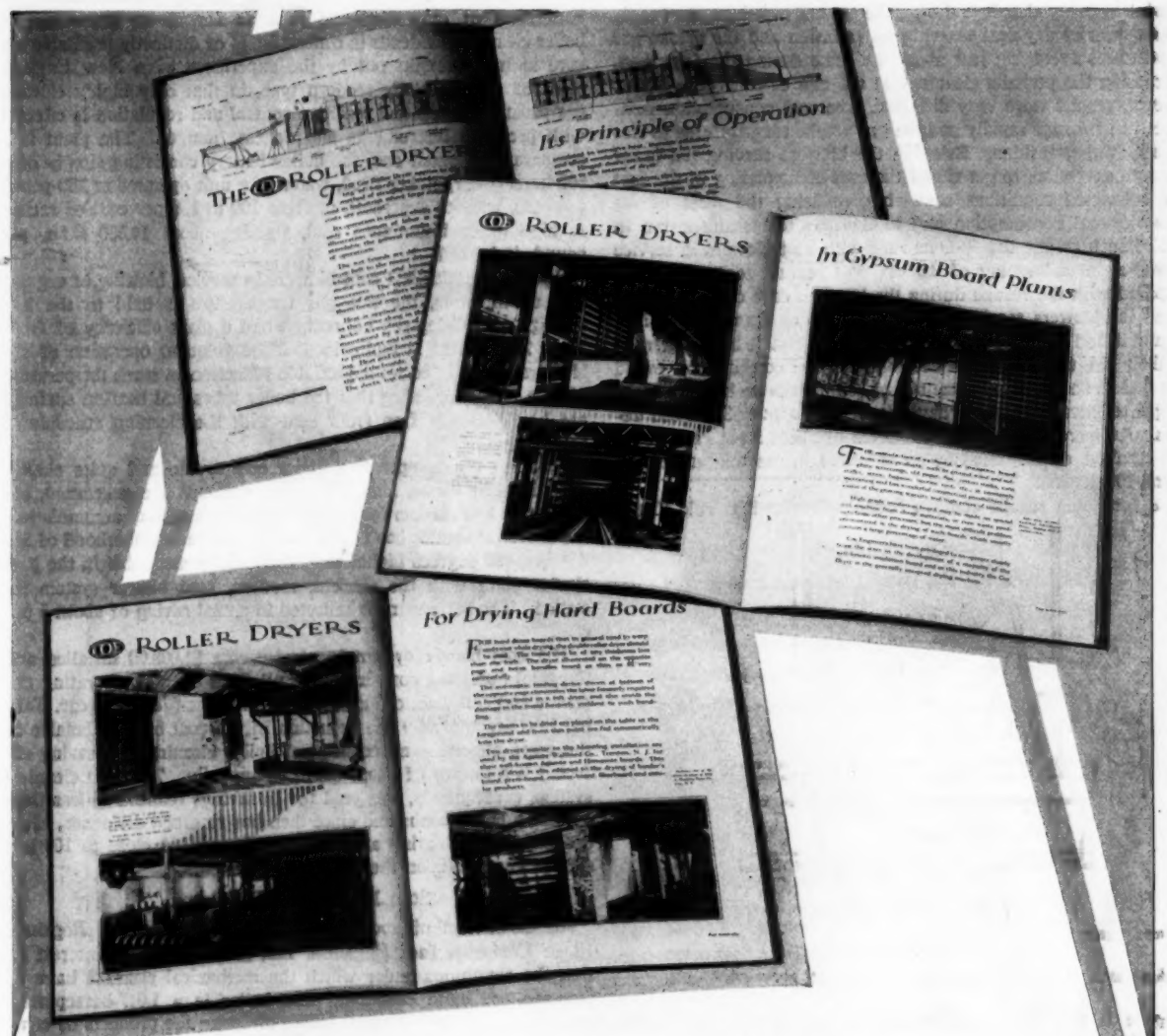

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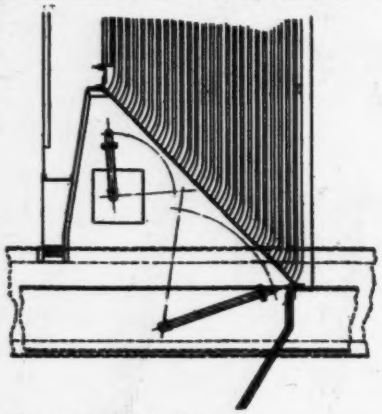
as twice as many cleanings during the second two days, the hourly consumption of dry coal showing no variation and the uptake gas temperatures averaging just about the same during the four days. On ceasing the periodic cleanings at the end of ninety-six hours, however, results were very different. The coal consumption commenced to increase rapidly and the gas uptake temperatures to rise in an alarming fashion. Bringing the blowers serving the lower deck into operation, to get rid of the soot accumulating in the first pass, alleviated conditions somewhat, reducing the rates of increase in coal consumption and in flue gas temperatures, but in spite of such respite the 48-hour runs with soot blowers in service showed an actual saving of 3.5 per cent in fuel consumption, as compared with the results during the last two days of the tests.

Had the blowers serving the lower deck not been brought into use and it had been possible to maintain the established load without their aid, the indications are that the coal consumption would have had to be increased some 600 or 700 pounds an hour and that the gas temperatures would have risen from about 550 to 650 degrees. An increase in coal consumption of about 5 per cent would have resulted, accompanied by an elevation in gas temperature of around 100 degrees.

The foregoing results confirm forcibly the familiar rule that a



Courtesy: Diamond Power Specialty Corp.

FIG. 4.

Application of Swinging Arm Blower Units to Tubular Air Heater.

20-degree drop in uptake gas temperature saves 1 per cent in fuel. Also, taking into account the fact that the elevation in gas temperature occurred during continuous 24-hour day operation, they pretty well substantiate the oft repeated statement that without soot blowing the uptake gas temperature will increase 15 to 20 degrees per ordinary industrial working day for the first four or five days.

Furthermore, the modern mechanical soot blower is a long lived device, unburdened by any material upkeep expenses. In fact, a survey[1] of some twenty-four plants, operating 221 boiler units in various sections of the United States, has been made to ascertain a dependable and fair average figure to cover estimated soot blower maintenance. These plants employed a large variety of boiler types and sizes, operating over a wide range of ratings, the units burning anthracite and bituminous coals on both chain grate and underfeed stokers, pulverized coal and oil. A careful check of all repair parts costs plus the labor of their installation over a five year period showed a weighted average maintenance cost of only 7.99 per cent of the initial installation cost for the annual upkeep expense of modern mechanical soot blowers. In view of the fact that the investment entailed for a soot blower installation is far from high, such a burden is in effect quite nominal.

Moderate Betterment Yields Good Return[2]

That a fuel saving of 3 or 4 per cent, though representing a betterment of only moderate rank so far as an attainment in boiler cleaning dividends is concerned, is of distinctly profitable nature is well brought out by the experience of a New England plant of an essentially modern type, in that only highly efficient equipment is in use and sensitive control and regulation is effected with precision instruments and delicate gauges. The plant is a comparatively small one, the boiler battery consisting simply of a 505-horsepower, stoker fired, water tube unit operated at 180-pound pressure, without superheat, at from 100 to 150 per cent of rating. A high grade bituminous coal, running about 14,300 B.t.u. per pound, is burned.

With the mechanical soot blowers in service, blowing at regular 12-hour intervals, the flue gas temperature is held to the low average of 450 degrees Fahrenheit and a plant efficiency of from 76 to 78 per cent is maintained. More frequent operation of the blowers has effected no appreciable reduction in stack temperature after a blow, indicating that the boiler tubes and heating surfaces are kept virtually free from soot with the cleaning schedule in force.

At other plants operating under comparable and quite similar conditions so far as load and steam demands are concerned, but employing hand lances for freeing the boilers of soot accumulation, the lowest attainable gas temperature is in the neighborhood of 550 degrees, 100 degrees higher than that readily attainable in the particular plant with the efficient, modern, soot blower system installed. The betterment is reflected in a coal saving of about 5 per cent.

The soot blower system in service cost $1,008.00 installed and the total operating cost, including all fixed charges, operating expenses and full maintenance, amounts to some $785.36 a year. Taking into account only the reduction in the coal bill attributable to the more effective and economical boiler cleaning, the saving effected is a matter of about $1,787.50 annually. The soot cleaning system, consequently, was paid for in savings realized in less than six and a half months and since then has returned dividends, after deducting all operating and carrying charges, of close to 100 per cent per annum upon the original investment.

Soot Removal at Bogalusa[3]

An installation of soot blowers at the plant of the Bogalusa Paper Company, Inc., Bogalusa, La., is of particular interest in that the conditions under which the mechanical cleaners have to function are quite exacting. The boiler is a 1,017-horsepower, water tube unit with vertical baffles directing the products of combustion over four passes. While the working steam pressure is only 160 pounds per square inch, the steam is generated in the large boiler at 450 pounds, superheated and stored in a steam accumulator. An air heater is also employed, incorporated within the boiler setting. The result is that unusually high temperatures are encountered, necessitating the blower elements being of somewhat special construction, in order to combat successfully the oxidation and warpage such high heats aggravate.

Seven elements of the swinging arm type are employed, the first three, located in the first and second passes, being fabricated from a special Chromium-iron alloy which will resist oxidation at temperatures up to 2,650 degrees Fahrenheit. The other four elements are of an extra heavy steel construction, being located in the third and fourth passes where the temperatures are somewhat lower and there is less danger of destroying the elements. In consecutive order, these swinging arm elements are located as follows: No. 1, through the first water leg just under the lower tubes, blowing in the general direction of draft and sweeping one side of the inclined baffle wall; No. 2 above the upper tubes in the first pass and near the first water leg, blowing over the inclined baffle and in the general direction of draft; No. 3, above the upper tubes and about midway between the first and second baffles, sweeping the first baffle, dislodging soot from the near side of the second baffle

[1] Statistics furnished by the Diamond Power Specialty Corp.

[2] Statistics supplied by the Vulcan Soot Cleaner Co.

[3] Statistics supplied by the Bayer Co.

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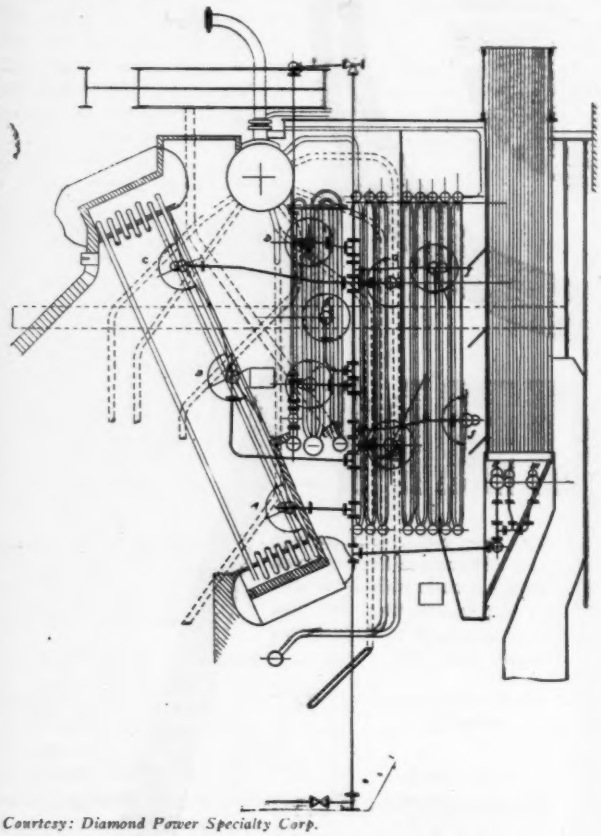
and blowing in the direction of draft; No. 4, located under the lower tubes between the second and third baffles, sweeps the lower end of the first baffle, the near sides of the second and third baffle and blows in the general direction of draft; No. 5 located in a plane with element No. 4, but above the upper tubes, dislodges the soot and fine ashes from the nearsides of the second and third baffles, blowing against the draft; while Nos. 6 and 7 are located at strategic points in the fourth pass, below and above the tubes respectively, blowing in the direction of draft and sweeping the near sides of the third baffle wall and confining water leg.

The soot blower equipment for this effective and highly efficient system of boiler cleaning cost approximately $700.00, entailing an investment of only a few cents per rated boiler horsepower



Courtesy: Diamond Power Specialty Corp.

FIG. 5.

Diagram of Soot Blower Installation in 1,200 horsepower single pass, water tube boiler. Waldorf Paper Products Co., St. Paul, Minn.

capacity and imposing such a very nominal burden that the freeing of the heating surfaces of any soot deposit whatever insures a very handsome return on the investment. In fact, a betterment of only an ounce in fuel consumption per horsepower-hour developed at 160 per cent of rating, gas and pulverized being employed as fuels, would mean a weekly saving of better than 6 tons of coal, or its equivalent.

Continuous Boiler Efficiency at 87 to 88 Per Cent[4]

The soot blower installation for the two 1,200-horsepower, single pass, water tube boilers at the new steam plant of the Waldorf Paper Products Paper Company, St. Paul, Minn., is another of the outstanding cleaning systems, one which has apparently eliminated the costly evils of dirty boilers so far as the accumulation of soot is concerned. At this plant, the boilers are fired on pulverized coal, unit system, and generate steam at a working pressure of 650 pounds and charged with 250 degrees of superheat. The pressure and temperature conditions, hence, are considerably more severe even than those pertaining at the Bogalusa Paper Company plant. In fact, the temperature conditions are considerably higher than in any other paper mill plant as yet operating on this condition.

Each boiler is equipped with twenty soot blower units of the swinging arm type, ten installed on each side, the boilers being thirty-six tubes wide, and located as shown in the accompanying diagram. Each air preheater is equipped with six soot blower units with swinging arm elements, similar to the swinging arm blowers shown in the detail depicting the application of such blowers to a tubular air heater. Three of these units are mounted in a staggered arrangement at each end of the air preheater so that all tubes are reached without overnozzling the elements.

The blowers are operated at intervals of twelve hours and clean the soot from the heating surfaces so thoroughly and effectively that a quite remarkably high boiler efficiency is maintained continuously and without appreciable variation in coal consumption. One of the two boilers has been in constant operation for a number of months, though the other is not as yet on the line, and as it has never been operated without soot blower service no actual figures can be presented concerning the annual savings effected by the efficient operation of the soot blowers. However, after running continuously for three months, the high initial overall efficiency of the boiler of 87 to 88 per cent remains unimpaired, indicating conclusively that the boiler has been kept thoroughly clean b the soot blower system.

The investment entailed for the soot blower equipment for one boiler and one air preheater amounted to $4,149.00, or less than 35 cents per normal horsepower rating. In other words, the trivial carrying charge on a 35 cent investment per installed boiler horsepower has to all intents and purposes, apparently, eliminated all wastes in boiler plant operation attributable to the settling of soot on the heating surfaces of the steam generator.

West Virginia Standardizes on Soot Blowers[5]

The soot blower installation on eight 600-horsepower, horizontal baffle, water tube boilers at the Mechanicsville, N. Y., plant of the West Virginia Pulp and Paper Company is also deserving of mention, for this firm has five systems of the same construction in its Piedmont, W. Va., plant, as well as two other swinging arm soot blower systems in operation at Mechanicville. While no actual figures of savings realized are available, the very fact that such devices are employed so extensively is an indication that quite substantial economies are being realized through the use of these cleaners.

The eight 600-horsepower boilers, operated at 200-pound steam pressure at the Mechanicsville plant, are equipped with series of soot blower elements on both front and rear water legs, entering through the hollow stay-bolts much after the manner previously described for a longitudinally baffled three pass, boiler, and a stationary element is installed for cleaning the top of the top baffle. The installation entailed an investment of approximately $380.00 in soot boilers per boiler.

In featuring these various installations of soot blowers, examples sufficiently dissimilar have been selected in order to focus attention upon the fact that an effective soot blowing system has virtually to be made to order, although blower elements, nozzles and soot blower heads of approved design have become more or less standardized and are, consequently, readily obtainable. The chief aim of the discussion has been, however, to broadcast general information concerning a power plant device which, while entailing a relatively moderate investment, effects marked economies in power plant operation and is invariably quite instrumental in reducing steam and power costs.

[4] Statistics supplied by the Diamond Power Specialty Corporation.

[5] Statistics supplied by the Bayer Company.

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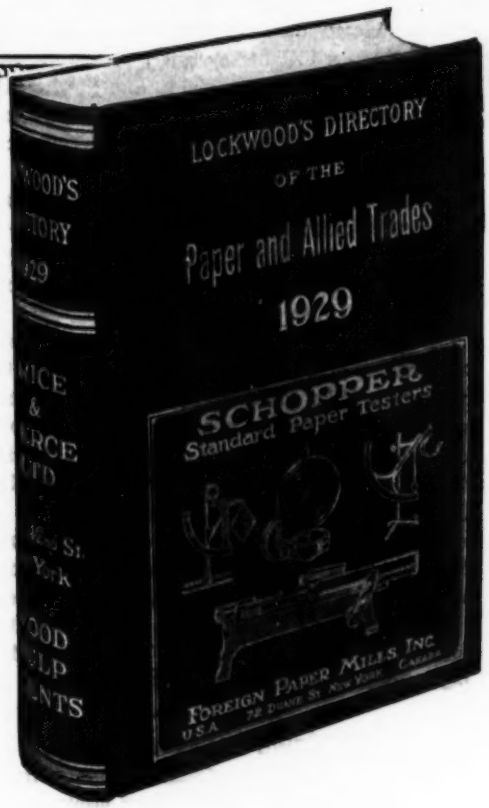

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TAPPI FALL CONVENTION

When the Technical Association of the Pulp and Paper Industry meets at Richmond, Va., beginning Tuesday, September 24, the educational features will, as is usual at the Fall meeting of the Association, be less strongly emphasized than at the annual convention in the winter. The section in which the convention is to he held presents opportunities for diversions that perhaps cannot be equalled elsewhere in the country. Judging from reports already at hand, the various committees are arranging to take every advantage of these. It is reasonable to believe, therefore, that the Fall meeting, in addition to all the serious features of TAPPI Fall conventions, will be perhaps the most pleasurable and interesting meeting that the Association has ever held.

Both the morning and afternoon of Wednesday, September 25, will be devoted to visiting Williamsburg, Jamestown and Yorktown. Williamsburg was the original capitol of the State and is the home of William and Mary College, one of the oldest educational institutions in the country.

Jamestown is the site of the first English settlement in America. It was established in 1607 and made permanent despite starvation, massacres and other hardships. The first negro slaves it is said were brought here and sold. Pocahontas was a frequent visitor, and was baptized here. Many dramatic incidents of Bacon's Rebellion took place here, and it was to this spot that the English maids were brought to become wives of the settlers in exchange for varying quantities of tobacco. The famous old church tower, that of the original church, monuments, etc. are among places of interest.

Yorktown is known to every student of American history as the place where the American Revolution ended with the surrender of General Cornwallis to George Washington.

The day will end with an elaborate banquet at the Jefferson Hotel. The people of Richmond, notable for their generous Southern hospitality are leaving no stones unturned to make the recreational features of the TAPPI meeting pleasantly memorable. No one will regret his visit to Richmond.

During the morning all the ladies will be taken to the Country Club of Virginia where a card party will be held and suitable prizes awarded. This will be followed by luncheon after which, arrangements will be made to play golf or enjoy the facilities of the club until it is time to take the train to Washington, D. C.

Headquarters in Washington will be maintained at the Wardman Park Hotel, one of Washington's most interesting hostelries, equipped with a swimming pool, riding stables, comfortable lobbies, etc. From here, many special trips may be taken. Those who have been in Washington before will want to see new places. So much is to be seen that no ladies' program will be prepared but no one will have difficulty in enjoying this great city during the period of the meeting.

All hotel reservations should be made at once through the Secretary of TAPPI, 18 East 41st Street, New York, N. Y. Everyone making an early reservation will be assured of the best accommodations and will receive a beautiful thirty page booklet entitled, "Down Where the South Begins," descriptive of Richmond and its environs.

The large attendance of women at the Wausau meeting of the Technical Association has led the local committee at Richmond, Va., to anticipate a large attendance at the meeting on September 24, 25 and 26, and plans are being made to assure all who attend, of an excellent time.

On September 24 registration for men and women will begin at 8:00 a.m. and at 10:00 p.m. a special luncheon will be provided in the famous Palm Room of the historic Jefferson Hotel. The afternoon will be devoted to a sight seeing trip in which the many beautiful and historical shrines of the city will be visited including the Confederate Museum, the State Capitol, John Marshall's home, Byrd Park, and Monument Avenue, one of the most beautiful residential streets in America, with its statues of President Jefferson Davis, General Lee and Stonewall Jackson, as well as many other points of interest in which Richmond abounds.

On the evening of September 24 a gala dinner and entertainment, followed by dancing in the Palm Room and Auditorium of the Jefferson Hotel will close a most enjoyable day.

NEWS PRINT IMPROVES

According to reports from Canada the upward trend in the newsprint industry continues, and as many plants are operating near to 90 percent of capacity, it is felt that the industry is in an enviable position as regards production compared with plants in various other lines of enterprise. There is already talk of the possibility of a price of $60 per ton being obtained under next year's contracts.

Meanwhile official figures in regard to exports continue to mount. According to the Canadian Pulp and Paper Association exports of pulp and paper in June were valued at $17,288,856. This was the second highest monthly total for the year and showed a gain in $1,786,789 over the total for June 1928. The tonnage of newsprint exported for the month rose from 174,031 in June 1928 to 219,895 in June, 1929, the value for the latter month being $13,055,556, as compared with $11,130,679 in June, 1928.

For the first half of the current year exports of pulp and paper were valued at $97,199,980 as compared with a total of 94,104,081 in the corresponding six months of 1928, and increase for this year of $3,095,899.

Wood pulp exports for the first six months amounted to $21,470,505 and exports of paper to $75,729,475, as compared with $22,339,880 and $71,764,201 respectively in the first half of 1928.

American Writing Makes Good Showing

HOLYOKE, Mass., August 12, 1929.—Striking increases in earnings of the American Writing Paper Company since its reorganization early in 1927, are reflected in the company's financial statement, which shows an increase of 35 per cent in profits for the first six months of 1929 as compared with the same period of 1928.

The company's statement shows profits of $267,250 for the first half of 1929, while for the first six months of 1928 profits were $197,810, representing an increase of $69,440. Still more striking is the comparison of the company's profits of the first half of this year with the same period of 1927. During the first six months of 1927 profits totaled $48,577.

Another unusual feature of the statement is that, while profits have increased steadily since the reorganization, gross sales have decreased. Gross sales for the first half of 1927 totaled $7,759,218. For the first half of 1928 gross sales were $6,856,720, and for the first half of 1929, $6,766,086.

Prior to the reorganization of the company in 1927, it was showing large losses annually.

"This steady increase in profits, accompanying a reduction in the volume of sales, indicates the discontinuance of the less profitable lines, with a strengthening in the sales of the better grades of paper," said Sidney L. Willson, president of the American Writing Paper Company. "The results also have been obtained through the economies effected by our rehabilitation, which we are now beginning to enjoy to a greater extent than heretofore.

"The outlook for the balance of the year is excellent. We anticipate a showing for the ensuing six months equal to that of the first six months."

BALANCE SHEET
AMERICAN WRITING PAPER COMPANY, INCORPORATED
June 30, 1929

ASSETS

	June 30, 1929	June 30, 1928
Current Assets		
Cash	$1,265,577.21	$1,415,707.10
Notes and acceptances(net)	101,229.24	82,726.92
Accounts receivable (net)	1,221,060.06	1,355,503.51
Inventories	2,002,016.92	2,477,321.17
Total Current	$4,589,883.43	$5,331,258.70
Plant and equipment (net of depreciation)	11,418,702.06	10,626,259.47
Net amount realizable through reorganization committee and on sale of assets	407,598.22	407,598.22
Investments	10,002.00	2.00
Prepaid expenses	83,638.42	55,593.72
Deferred taxes	2,537.40	2,471.85
Other deferred assets	16,867.55	9,145.55
Trade marks, etc.	1.00	1.00
Payable on common stock in escrow for options.	66,750.00	.....
Total Capital	$16,595,980.08	$16,432,330.51

LIABILITIES

Current Liabilities		
Accounts payable	$387,068.53	$488,694.90
Dividends payable	67,500.00	0
Accrued accounts	133,702.05	126,557.82
Reserve for Federal taxes	58,380.66	17,613.29
Total Current	$646,651.24	$632,866.01
First mortgage bonds	5,500,000.00	5,500,000.00
Less: In treasury	34,000.00	34,000.00
Serial notes	700,000.00	850,000.00
Less: In treasury	90,000.00	109,500.00
Total Fixed	$6,076,000.00	$6,206,500.00
Net Worth		
Preferred stock V. T. C. 90,000 shares		
Less: In treasury..... 734.42393 shares		
Common stock V. T. C...200,000 shares		
Less: In treasury ..... 2,747 shares		
Less: In escrow for options ..... 9,175 shares		
Capitalization	9,345,322.33	9,245,322.33
Surplus	360,325.75	149,831.94
Less: Dividends declared	67,500.00	.....
Profit—Current *	235,180.76	197,810.23
Total Net Worth	$9,873,328.84	$9,592,964.50
Total Liabilities	$16,595,980.08	$16,432,330.51

* After Federal taxes.

Freight Rates to Carthage Protested

CARTHAGE, N. Y., August 10, 1929.—Following persistent efforts to reduce freight rates to this district the Carthage Pulp and Board Company has filed complaint with the Interstate Commerce Commission at Washington. In the complaint, W. C. Rommel, president of the firm, says:

"Rates charged complainant on carload shipments of waste paper from Brooklyn and New York lighterage are $1.20 a ton higher than to Fulton, N. Y., and from the other New York stations are 80 cents a ton higher than to Fulton.

"Rates to Carthage are unreasonable and the present level of rates has resulted in the larger of two paper machines being shut down. Letter dated September 2, 1927, directs attention to the fact that finished board is hauled from Carthage to New York, 300 miles, at the same rate as from Fulton to New York, 306 miles, but for waste paper hauled in the reverse direction the rates to Carthage are stepped up to $4.60 and $5 a ton as compared with $3.80 to Fulton.

"Reference is made to exhibits B and C as to disadvantage of very much higher transportation costs assessed against Northern New York. Complainant submits that the rate to Carthage from any New York station should not exceed the 19 cent carload rate per 100 pounds now in effect to competitor at Fulton and further requests that the commission shall make an order for reparation awarding and directing the payment to complainants of damages sustained.

"The commission has held that the Port of New York shall be considered as a unit for transportation purposes. Therefore rates to Carthage should be the same from all stations. Further with identical rates from Carthage and Fulton to New York on finished product the rate on waste paper to Carthage should not exceed the rate to Fulton, namely $3.80."

New York State Reforestation

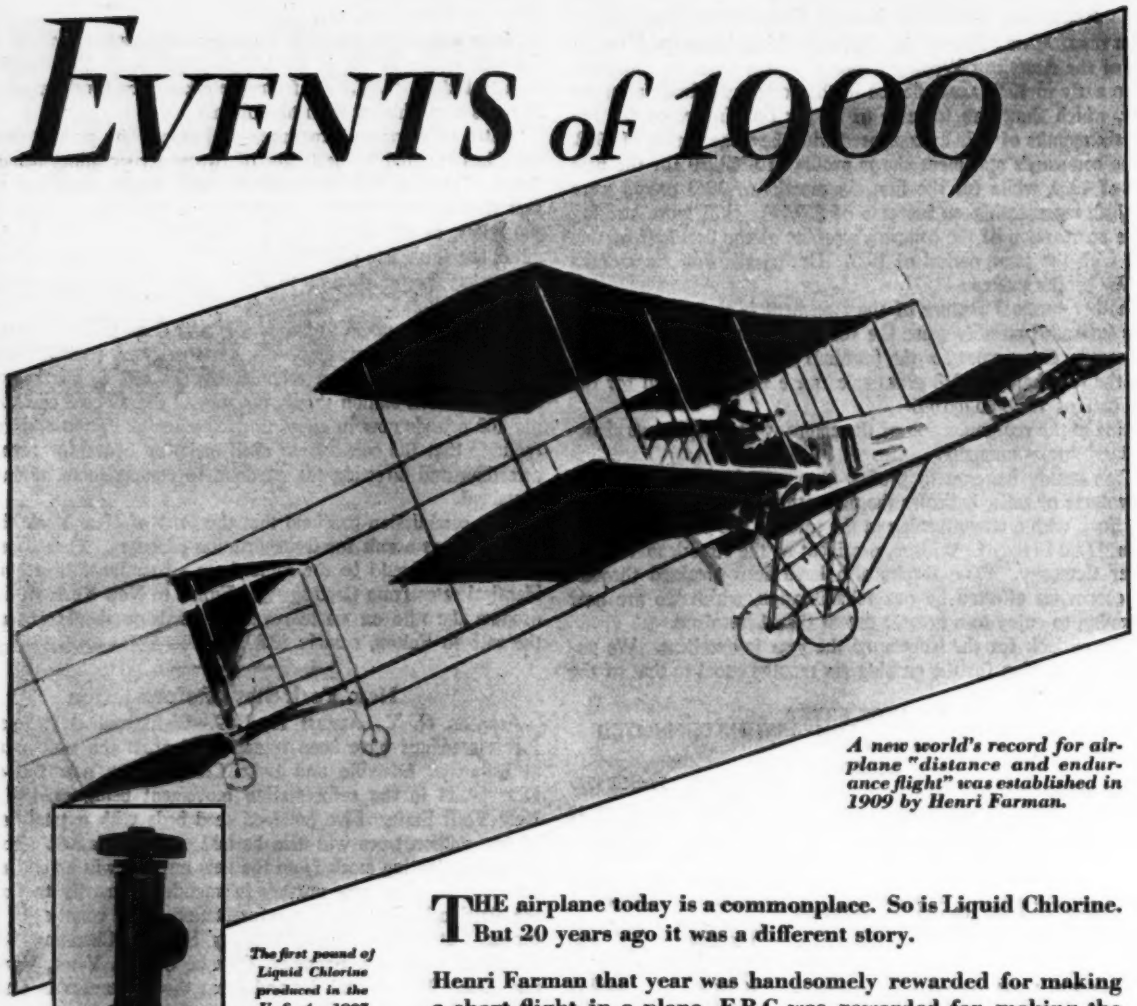
ALBANY, N. Y., August 10, 1929.—Eight million two-year-old forest seedlings have been transplanted from the state nurseries at Saratoga, Lowville and Lake Clear to the new nursery at Horseheads in the reforestation movement being carried on in New York State. Five hundred seed beds with a total capacity of five million trees will also be laid out and planted. Shipping of forest planting stock from the new nursery will be started this coming fall. The new nursery is intended primarily to facilitate the distribution of trees for reforestation in the counties of Chautauqua, Cattaraugus, Tioga, Allegany, Steuben, Chemung, Broome, Cortland, Tompkins, Schuyler, Cayuga, Seneca, Yates, Wyoming, and Erie. The normal demand from those counties is estimated at from five to six million trees a year.

Apart from forest seedlings the plantings at the new nursery include seeds of a number of varieties, including white mulberry, red mulberry, Russian mulberry, silky, roundleaf and flowering dogwood, red and black choke berry, thicket hawthorne and Washington hawthorne, Virginia creeper, north bayberry, mountain ash, arrowwood, black haw, Japanese barberry, wild crabapple and wild grapes. None of the food plants in the nursery stock will be sold or distributed but will be retained for use on the state game refuges. The new nursery is under the direction of F. E. Otis, who was transferred from the Lake Clear plantation.

Doherty Resigns From St. Lawrence Paper Co.

CARTHAGE, N. Y., August 10, 1929.—Daniel Doherty has severed his connections as superintendent of the St. Lawrence Paper Company in Sioux St. Marie and returned to his former home here. He has had wide experience in the paper mill business, having been employed as both day and night superintendent in several mills. For a number of years he lived in Newfoundland, where he served as superintendent of a mill at Grand Falls. Among the trophies which the family brought back with them are caribou heads, horns and other interesting articles from Newfoundland. The family is also the owner of a baby seal which was captured while they were on a hunting expedition. It has been mounted and is in a perfect state of preservation. Mr. Doherty expects to remain here for several weeks in order to recuperate from a run down condition.

EVENTS of 1909



A new world's record for airplane "distance and endurance flight" was established in 1909 by Henri Farman.

The first pound of Liquid Chlorine produced in the U. S. A., 1907

Over 20 Years Ago E B G Pioneered in the Manufacture of Liquid Chlorine.

THE airplane today is a commonplace. So is Liquid Chlorine. But 20 years ago it was a different story.

Henri Farman that year was handsomely rewarded for making a short flight in a plane. E B G was rewarded for making the first Liquid Chlorine by having it accepted by the textile industry and put to better bleaching.

The passing of time has seen the adoption of Liquid Chlorine by other great industries. E B G has gone steadily forward, maintaining quality and enlarging facilities to care for the constantly increasing demand.

In excellence of product, value of cooperation, celerity of service and responsibility of organization, E B G offers real advantages to users of Liquid Chlorine.

Liquid Chlorine

EBG

Electro Bleaching Gas Co.

PIONEER MANUFACTURERS of LIQUID CHLORINE

MAIN OFFICE:
9 East 41st St., New York
PLANT:
Niagara Falls, New York

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Thorne Pressure Process of Sulphite Cooking

Kipawa rayon pulp has earned for itself a most enviable world-wide reputation. Every possible precaution is taken to ensure the very highest quality product, and with this end in view several important improvements have been made in the standard sulphite mill practice. C. B. Thorne, technical director of the Riordon Pulp Corporation, has already made several interesting and valuable contributions to the industry in this respect, the best known probably being the Thorne Barking System and the Thorne Bleaching System. So far, however, very little has transpired concerning the cooking process in use at Kipawa. Mr. Thorne was recently granted a United States patent No. 1,691,682, November 13, 1928, for a "Process and Apparatus for Producing Wood Pulp", a description of which will doubtless prove interesting to the industry.

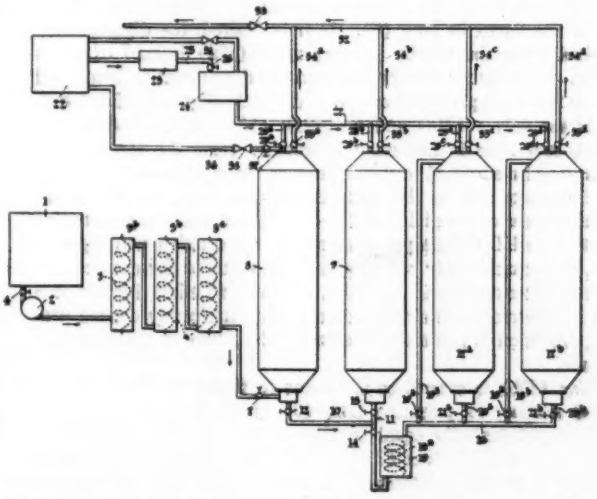
It is stated that the aim of the invention is to provide a process and apparatus for handling and circulating the liquor, for charging the digester with liquor at a high temperature (practically the cooking temperature), and to utilize the heat in the waste gases and liquor to preheat the cooking liquor. While it is claimed to be applicable with any of the usual cooking liquors, it seems particularly suitable for the sulphite process and is described in connection with this process.

Description of the Apparatus

In the sulphite process it is particularly desirable to retain the sulphur dioxide gas in the liquor. When the liquor is heated there is a tendency for the gas to be liberated, and in order to avoid this the heated liquor is kept under pressure of any suitable gas which will not give undesirable reactions with the liquor. An inert gas, such as nitrogen, may be used, but sulphur dioxide gas is particularly suitable.

In the accompanying drawing, which represents diagrammatically an apparatus for carrying out the process, (1) is an ordinary storage tank for the supply of cooking liquor, and is connected through pump (2) to a series of heaters (3a), (3b), (3c), a valve (4) being provided to regulate the discharge from the tank. The heaters are provided with heating coils (5). The pipe (6) is provided with a check valve (7) and leads to a hot liquor tank (8), which is connected to a circulating or pulsating tank (9) by means of pipes (10) and (11) having valves (12) and (13). This tank (9) is connected by means of an extension of pipe (11), having a valve (14,) through a heater (15) to the cooking liquor line (16) which, as indicated, leads to a series of digesters (17a), (17b), etc. The pipe (18a), having a valve (19a), lead from the liquor line (16) to the top of the digester (17a), and the pipe (18b) having the valve (19b) leads to the top of the digester (17b), while the liquor line (16) is connected to the bottom of the digesters by means of pipes (20a) and (20b) having valves (21a) and (21b), respectively.

The tank (22) is for gas storage and is connected through a compressor (23) to a compressed gas supply tank (24) by means of a pipe (25) having a valve (26). A compressed gas supply line (27) leads from tank (24) and is connected by means of pipes (28a), (28b), (28c) and (28d), having valves (29a), (29b), (29c) and (29d), respectively, to the hot liquor tank (8), the pulsating or circulating tank (9) and the digesters (17a) and (17b), respectively. A pipe (30) having a safety valve (31) leads from the compressed gas tank (24) to the tank (22). A gas relief line (32), having a safety valve (33), is connected to the hot liquor tank



(8), the pulsating tank (9) and the digesters (17a) and (17b), respectively, by means of the pipes (34a), (34b), (34c) and (34d) having valves (35a), (35b), (35c) and (35d). The gas relief line (32) conveys the relief gases to the heaters and or to a gas recovery device. A pipe (36) having a stop valve (37) and a safety valve (38) connects the tanks (8) with the gas supply tank (22).

The digesters are of the usual construction, and the liquor tank and the circulating or pulsating tank are of similar construction. The heaters (3a), (3b) and (3c) utilize the heat of the waste products of the process. Thus the hot liquor from the blow pits may be passed through the coil (5) in heater (3a), while the relief from the digesters may be passed through the coil (5) in the heater (3b) and live steam, a hot gas or fluid, or even a direct flame may be used for heating the heater (3c), to finally bring the temperature of the liquor passing there through to the required

temperature. When spent liquors are used as the heating medium, they are maintained at a higher pressure than that of the cooking liquor passing through the heater, so that, should leaks occur, the fresh liquor will not escape into the heating medium. Moreover, an additional heating element (not shown) may be placed in tank (8) to further assist in raising the temperature of the liquor.

The pump (2) is designed to fill the hot liquor tank (8) against a pressure of approximately 100 pounds per square inch, and the safety valves are designed to maintain predetermined desired pressure in the respective parts of the apparatus.

Method of Operation

By means of the compressor (23) gas from the supply tank (22) is forced into the compressed gas supply tank (24), from which it is passed through pipes (27) and (28a) into the hot liquor tank (8), until a pressure of approximately 70 pounds is produced therein, when valve (29a) is closed. The valve (37) being open, the safety valve (38) maintains a constant pressure in tank (8).

Liquor is pumped from the liquor supply tank (1) through the heaters (3a), (3b) and (3c) where it is heated to a temperature of about 100° to 130° C., depending on the pressure, into tank (8) under pressure, while the gas is relieved through pipe (36) and safety valve (38) into the gas supply tank (22). When the tank (8) is substantially filled, valve (4) is closed and the pump (2) stopped.

The digester (17a) having been filled with chips in the usual manner, valve (29a) is opened and gas is allowed to pass into the digester until a pressure of about 70 to 100 pounds is reached, depending on the cooking pressure employed, when valve (29c) is closed. Valves (12), (14), (21a), (29a) and (35c) are opened, and valve (35a) being closed, hot liquor is forced into the digester from the bottom, while the gas from the digester is relieved through pipe (34c) the relief line (32) and safety valve (33). This movement of the liquor is caused by the pressure of the gas on the liquor in tank (8). If it is desired, the digester may be filled from the top by opening valve (19a) instead of valve (21a); or the liquor may be run into the digester at both top and bottom by opening both these valves. When the digester is filled with liquor the valves (21a) and or (19a), (14), (12) and (29a) are closed, and if it is necessary to further raise the temperature, steam may be admitted to the digester in the usual manner.

It is evident that, as the liquor is introduced into the digester at a temperature of about 100 to 130 deg. C. and under a pressure of about 70 to 100 pounds per square inch, the cooking will begin at once, thus considerably reducing the time required for cooking and the steam consumption. In order, however, to effect further savings in this respect and to produce a more uniformly cooked product, provision is made for circulating the liquor in the following manner.

Valve (29b) is opened to allow gas to flow from tank (24) to the circulating or pulsating tank (9) until the pressure therein becomes substantially equal to that in the digester, when valve (29b) is closed. Valves (29c), (21a) (14) and (13) are opened and gas from the compression tank (24) flows into the digester forcing the liquor out into tank (9), while at the same time valve (35b) is opened to permit the relief of the gas from tank (9). When the desired amount of liquor has been withdrawn from the digester, valves (35b) (29c) and (21a) are closed and valves (19a), (35c) and (29b) are opened and the liquor from tank (9) forced back into the top of the digester. If preferred, the liquor may be forced back directly into the bottom of the digester, thus causing what may be termed a pulsation in the digester instead of a straight circulation of the liquor. This circulation or pulsation may be repeated as often as required for the particular material being cooked.

In the treatment of some classes of wood it may be preferable to operate the digesters successively or in conjunction with one another. For example, after the charge of chips in digester (17a) has been cooked for a certain length of time the liquor may be transferred to digester (17b), which was previously filled with chips and with gas at a pressure of about 70 pounds, by opening valves (29c), (21a), (21b) and (35d). When the liquor has been transferred, the valves are closed, and steam is admitted to digester (17b) to start the cook. A further charge either of fresh liquor from tank (8), of used liquor from one of the other digesters of the series, or of liquor from some other source not shown, is then forced into digester (17a) to complete the cooking of the charge, the liquor being transferred by gas under pressure.—A. P.-C.

New TAPPI Members

The following have recently become members of the Technical Association of the Pulp and Paper Industry:—

R. H. Clapperton, Consulting Engineer, 18 Maidstone Road, New Southgate, London, England.

Norman Clark, Superintendent of Coating Mill, Standard Paper Manufacturing Company, Richmond, Va.

A. M. Cooper, Sales Engineer, Westinghouse Electric and Manufacturing Company, Philadelphia, Pa.

C. Crusius, Mechanical Engineer, American Voith Contact Company, 280 Madison avenue, New York, N. Y.

C. D. Goodwin, Technical Director, Central Paper Company, Muskegon, Mich.

J. P. Hagenauer, Industrial Engineer, L. V. Estes, Inc., Chicago, Ill.

J. L. Hooper, Chief Chemist, Pacific Mills, Ltd., Ocean Falls, B. C.

A. F. Horton, Sales Engineer, National Aluminate Corporation, Chicago, Ill.

E. Kayatz, Consulting Engineer, Central Paper Trust, Moscow, Russia.

J. Khramtzoff, Chief Engineer, Central Paper Trust, Moscow, Russia.

E. L. Lamb, Student, N. Y. S. College of Forestry, Syracuse, N. Y.

S. E. Meyers, Mechanical Engineer, Merritt Engineering and Sales Co., Lockport, N. Y.

F. H. Queck, Chemist, River Raisin Paper Company, Monroe, Mich.

F. Schmitz, Jr., Plant Engineer, Rainier Pulp and Paper Company, Shelton, Wash.

H. C. Schwalbe, Research Chemist, Dill & Collins Company, Philadelphia, Pa.

New TAPPI Corporate Members

The Technical Association of the Pulp and Paper Industry has already exceeded its record of 1928 in increasing its corporate membership. It now includes nearly all of the really progressive pulp and paper companies in the United States and several outstanding mills abroad. It includes all three of the important companies in Japan.. Following is a list of the companies joining TAPPI in 1929.

D. M. Bare Paper Company, Roaring Spring, Pa.
Cherry River Paper Company, Richwood, W. Va.
Deerfield Glassine Company, Monroe Bridge, Mass.
DuPont Rayon Company, Buffalo, N. Y.
Eastern Manufacturing Company, Bangor, Me.
Falulah Paper Company, Fitchburg, Mass.
Fuji Paper Company, Tokyo, Japan.
Robert Gair Company, 420 Lexington avenue, New York, N. Y.
P. H. Glatfelter Company, Spring Grove, Pa.
Jessup & Moore Paper Company, Wilmington, Del.
Masonite Corporation, Laurel, Miss.
Northern Paper Mills, Green Bay, Wis.
Ontario Paper Company, Thorold, Ont.
St. Anne's Board Mill Company, Bristol, England.
Standard Paper Manufacturing Company, Richmond, Va.
Tomahawk Kraft Paper Co., Tomahawk, Wis.

Paper Stock Feed Regulators

By Joseph Rossman[1]

Many devices have been designed for regulating the feeding of the pulp to the paper making machines. After the stock has passed through all the preliminary processes of reduction to pulp it reaches the stuff chest, which is a large tank or receptacle containing agitators to keep the contents of uniform consistency and prevent the separation and settling of the heavier portion. From this stuff chest the contents are pumped, by a pump connected with the machine into the stuff box, a stream of pure water being allowed to flow into the box when desired to dilute the stuff before it passes to the machine proper and to the wire cloth where the water is removed and the pulp left in the sheet form.

It is obvious that with a given quantity of stuff passing out in a given time to the machine the paper resulting will vary in thickness as the stuff pumped into the stuff box from the stuff chest is heavier or lighter in consistency.

In practice it would be impossible for the operator to preserve a uniform consistency of stuff by his own observation and tests with such accuracy as to insure a uniform thickness of the paper, for the reason that the consistency of the stuff in the main stuff chest varies constantly as the contents of different beating engines are emptied into it, and consequently the stuff pumped from this stuff chest to the stuff box also varies in consistency from this cause, which is, of course, not under the control of the operator, so that, were he to test its consistency in the stuff box and find it wrong, the flowing mixture has been and is still going out to the machine, and consequently the sheet rendered too thick or too thin, while he has been testing and before he can remedy the difficulty.

Another method consists in taking a certain sample, as one complete sheet of the paper being made, and weighing it to determine whether the weight per ream is what is desired. If it is not, the machine making the paper is adjusted according to its needs until a sample tested is satisfactory. The objection of this method is that it is rather tedious, and the operator can not know exactly what results are being obtained until a considerable quantity of paper is made. During the testing and adjusting of the machine a large quantity of paper off weight is made, a large amount of time is wasted, and the continual attention of a skilled operator is required.

Various attempts have been made to control automatically the flow of the stuff from the stuff box, such as by the use of self regulating valves. The thickness of the web has been controlled by regulating the flow of stock, the flow being reduced as the stuff increased. An attempt has also been made to secure the same result by means of a balanced flexible diaphragm, over which the stock was caused to flow in a thin stream, and upon which the stock accumulated to an increased extent as it became thicker, the diaphragm being connected with a gate to regulate the flow, and with a valve through which water was discharged into that portion of the stock which has passed beyond the diaphragm into a feeding chamber.

A description will be given of some of the typical devices which have been patented.

The Use of a Balanced Vessel

U. S. patent 564,035 dated July 14, 1896 to Stobie automatically controls and accurately regulates the flow or feeding of the pulp or stock to the paper making machine, so that whatever may be the consistency or density of the stock it will be delivered to the paper making machine evenly and regularly, thus producing paper of uniform texture and weight. (Plate 1.)

The operation is as follows: The stock is supplied to the tank A and fed to the receptacle B through the conduit or pipe C, the amount of stock which eventually reaches the paper making machine being controlled by the valve mechanism (18). The stock as it increases in density will run slower, and as it decreases in density runs faster from the receptacle, the weight or specific gravity being correspondingly varied. When, therefore, the stock thickens, it becomes heavier and accumulates in the receptacle causing it to tilt downward on its bearings, and through the connection to the valve (18) causes the valve to partly close the pipe C, preventing the rapid flow of the stock into the receptacle. On the other hand, if the stock becomes thin it runs from the receptacle B faster, and the receptacle with its contents made lighter, and consequently, through the action of the counterbalance and spring, assumes a higher position, which opens the valve (18) and permits a larger quantity of stock to flow into the receptacle.

The supply of water for thinning the stock is controlled and regulated by the same movements of the receptacle B. When the stock in this receptacle is thick, it does not run out so fast. Hence the contents accumulate and bear the receptacle down, as heretofore stated, to a lower position, opening the valve 15 and simultaneously or synchronously, the lower positions closing the stock

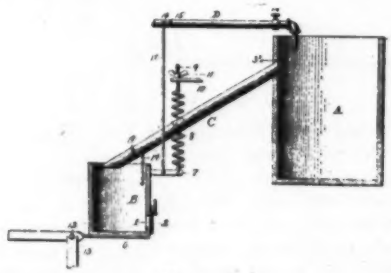


PLATE 1

valve and opening the water valve, and the higher positions opening the stock valve and closing the water valve, the movements being automatically effected by the specific gravity or weight of the stock in the receptacle, and thus the consistency of the stock and the quantity discharged or delivered to the paper making machine is controlled and regulated.

Regulation by a Density Float

U. S. patent 276,127 dated Apr. 17, 1883 regulates the stuff supply by means of a float which acts on an adjustable gate. (Plate 2).

A is a box divided into three compartments by the partition B, which runs from one side of the box to the opposite side, and the partition C, which extends from the partition B to one side of the box. The larger compartment is provided with an aperture in the bottom, near its center, through which the stuff is forced by a pump into the box beneath the float F, which rests upon the surface of the stuff. The partition B does not extend so high as the sides of the box. Consequently if more stuff is forced into the box after it is filled to a level with the top of partition B, the stuff will escape by gravity over the partition into the two smaller compartments, each of which is provided with an escape opening in the bottom, the opening D leading to the paper making machine, and the opening E leading back to the reservoir from which the stuff is pumped into the box.

A gate G is supported by the sliding rod H. The lower end of the gate rests against the upper side of partition B, and compels the stuff escaping from the box to flow through the narrow openings on either side of the gate. The sliding rod H is connected with the float F, so that the one acts upon the other by means of the levers I and J, shaft K, and upright L.

When the stuff being delivered into the box from any cause changes in density or quality, for example, becomes thicker, it be-

[1] Patent Examiner, U. S. Patent Office, Washington, D. C.

comes necessary, since the pump supplies a constant quantity, to diminish the supply going to the machine and let the surplus escape which is done by the action of the float upon the gate in the following manner: The thicker stuff does not run so freely over the partition B and dams up, as it were, until the pressure is sufficient to force the same quantity over the partition. This damming up causes the surface of the stuff in the box to assume a higher level and raise the float. As the float rises it acts upon the levers and shaft before mentioned, and causes the rod H to slide

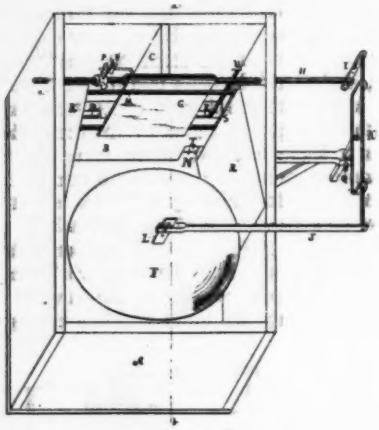


PLATE 2

to the left, or toward the opening which leads to the machine. The sliding rod carries with it the gate, which narrows the outlet to the machine and widens the opening through which the surplus escapes. When the stuff in the box becomes thinner it flows over the partition more easily, the level is reduced, the float falls with the surface of the stuff, and the relative size of the outlets changes to increase the supply to the machine. It is evident, therefore, that any variation in the thickness of the stuff acts to regulate the supply before any part of it can reach the machine.

T is a discharging gate provided with handle U, by which it can be raised, sliding in supports I, attached to the partition B, so as to leave open the aperture N in the lower side of the partition, through which the box may be emptied when not in use or when desired.

Feed Regulation Controlled by Speed of Machine

U. S. patent No. 806,115 dated Dec. 5, 1905 to Daniels controls the consistency and feed of the stuff by the speed of the machine. Plates 3 and 4.

A is a stuff box provided with a compartment B, a corner compartment C, which extends from its bottom to a point adjacent to its top, and a comparatively shallow corner compartment D, arranged alongside of the first mentioned corner compartment. Intermediate of the compartment B and the compartments C and D is arranged a slidable cut-off E, which is preferably a metallic plate disposed vertically, as shown, and is provided with a handle a, extending through one of the side walls of the box A, whereby it may be conveniently adjusted by the operator without the necessity of the attendant reaching into the box.

F is a funnel or funnel shaped hopper arranged in the compartment D of box A with its upper end flush with the upper edge of the wall between the compartment D and the compartment B and having its lower portion depending below the bottom wall of the compartment D and terminating in a circular portion G of even diameter throughout its height.

H is a vertically movable cone shaped valve for controlling the lower portion or discharge G of the funnel shaped hopper. I is the stem of the valve; K, a vertically swinging lever fulcrumed on a fixed support b and having one of its arms connected with the valve stem I and its other arm weighted, as indicated by L; M, a dash pot mounted on a fixed support N and receiving a piston P, connected to the weighted arm of the lever K, so as to cushion the downward movement of the weighted arm; R, a sleeve fixed to and rising from the support N and having a bifurcation c in its upper end; S, a sleeve movable vertically in the upper portion of the fixed sleeve R and having a cross-bar d movable vertically in the bifurcation of the fixed sleeve and also having a circumferential groove e in its upper portion; T, a rod connecting the cross-bar of the vertically-movable sleeve S and the weighted arm of the lever K; U, a head mounted to rotate in the circumferential groove e of the sleeve S; V, a shaft extending through the sleeves S and R and having a miter-gear f on its lower portion below the top of the support N and also having a head g at its upper end; WW, weighted arms hinged to the head g, so as to swing vertically under the influence of centrifugal action; XX, links connection the rotary head U on the sleeve S which the arms W, and Y is a shaft bearing in the support N and having a miter-gear h intermeshed with the before-mentioned miter-gear f and also having a band-pulley i designed to be connected with the paper pulp engine, the paper making machine, or the engine, from which the paper pulp engine and paper making machine derive motion. By virtue of this connection when the apparatus is in operation the arms W, which constitute a centrifugal governor, will be raised by an increase of speed of the shafts Y and V and will fall of themselves when the speed of the shaft diminishes. When the arms are raised as stated, the head U, the sleeve S, and the weighted arm of the lever K will be raised with the result that the other arm of the lever K will be depressed, as will also the cone-shaped stuff-valve H, so as to permit the stuff to pass through the discharge G to the machine at a speed and in a volume commensurate with

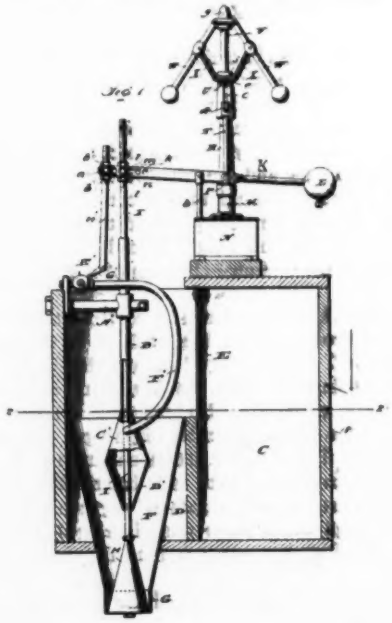


PLATE 3

the speed of the machine. In the event of the speed diminishing from any cause whatsoever the arms W will fall so as to permit of downward movement of the weighted arm of lever K and a consequent upward movement of the stuff-valve H to diminish the speed and volume of the stuff fed to the machine, and it will further be apparent that intermediate the full opening and the entire closing of the stuff-vale H the governor and the parts connected therewith will nicely regulate the valve, so as to vary the feed of the stuff in the proportion to the variations in speed of the machine. The weight L on the Lever K counterbalances the load

of stuff in the funnel or funnel shaped hopper F, so as to enable the governor to work freely and quickly, while the funnel shape of the hopper and the cone shape of the stuff-valve regulate the passage of the stuff in proportion to its consistency, i. e., if the stuff is thick the peculiar-shaped hopper and valve will retard its passage, while if it is thin the hopper and valve will permit of it passing freely and in this way will contribute materially to the uniformity of the sheet of paper being made. The stuff-valve H is vertically adjustable relative to the lever K, and it will be apparent that when the valve is lowered the weight of the sheet of paper being made will be increased, while when the valve is raised the sheet of paper will be rendered lighter in weight.

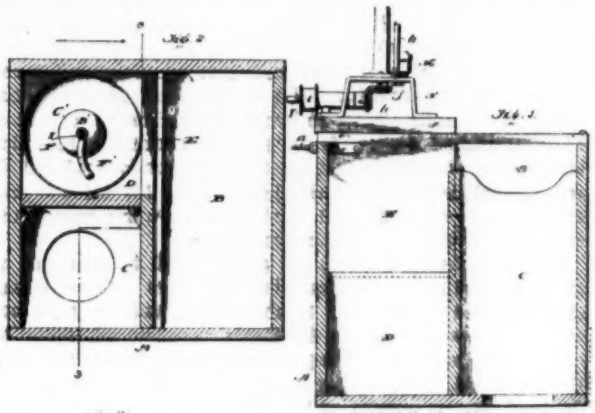


PLATE 4

In the operation of the feeder the shaft Y is rotated and stuff is fed from a main chest of other source of supply to the compartment C of the stuff-box A through the bottom of the compartment. From the compartment C the stuff passes over the upper edge of one wall thereof into the compartment B, and from this latter compartment the stuff passes, subject to the control of the cut-off E, into the funnel-shaped hopper F, where water is added to the stuff in the manner and for the purpose before set forth. From the hopper F the stuff passes, subject to the control of the valve H, to the proper machine.

It will be gathered from the foregoing that both the consistency and the feed of the stuff are varied in proportion of the speed of the machine, with the result that the product will be uniform, notwithstanding slowing down of the engine or slipping of the drive-belt to the shaft Y.

Imparting Velocity to the Stock

The object of U. S. patent No. 933,656 dated Sept. 7, 1909 to Millard is to give the pulp a velocity as nearly as possible equal to the velocity of movement of the wire, so that the pulp and the wire are in effect stationary relative to each other, although they travel together. This results in the draining of the pulp without any dragging movement of the wire against the pulp to disturb the fibers, the result being the formation of a better matte.

In operating a Fourdrinier machine, the liquid pulp is flowed on to the surface of the traveling wire A at a point adjacent to the breast roll A^3 over which the wire travels, it being customary to cause the pulp to empty from a tank, the surface level and overflow point of which are substantially on a level with the wire A. The pulp in this case is substantially stationary, that is to say, has no initial velocity, when it is delivered to the wire, and is dragged along by the wire in the draining and drying process.

In order to give the pulp an initial velocity of flow, so that it tends to travel with the wire, instead of being dragged along thereby, the machine is provided with means for giving the pulp such initial velocity, by providing the apparatus with a gravity feed such as an inclined trough down which the pulp flows to the wire.

In the construction shown in (Plate 5—Figs. 1 to 3,) the tank a, which is kept supplied with a quantity of pulp, is provided with a vertically movable dam b provided at the top with a runway or trough c extending from the top of the dam or the overflow down to the surface of the wire A. The pulp overflowing from the tank, therefore, and running down the trough, will acquire a certain velocity which may be regulated by varying the inclination of the trough, until it substantially equals the velocity of movement of the wire A. In the construction shown, the trough c is hinged at c^2 to the top of the dam b, and is provided at its lower end with a flexible apron c^3 which lies in contact with the wire A so as to permit the pulp to distribute itself evenly over the wire.

To vary the inclination of the trough c, the dam b is vertically movable, being shown as provided with a rack b^2 in mesh with the pinion b^3 arranged to be operated by a hand wheel b^4. The dam may be fitted into the wall of the tank in any suitable way, the tank being here shown as formed with recesses a^3 at opposite sides in which the opposite ends of the dam b fit with sufficient accuracy to prevent leakage. It is sometimes desirable to draw off the pulp from a level below the surface thereof, so as to prevent any foamy substance floating on top from reaching the wire, and a supplemental adjustable cut-off b^5 operated for adjustment by a hand-wheel b^6, is here shown for the purpose of regulating the size of the opening. The trough c is shown as supported at its lower end upon a stationary cross member C, so that the trough will not be shaken by the vibratory movement of the shake-rails.

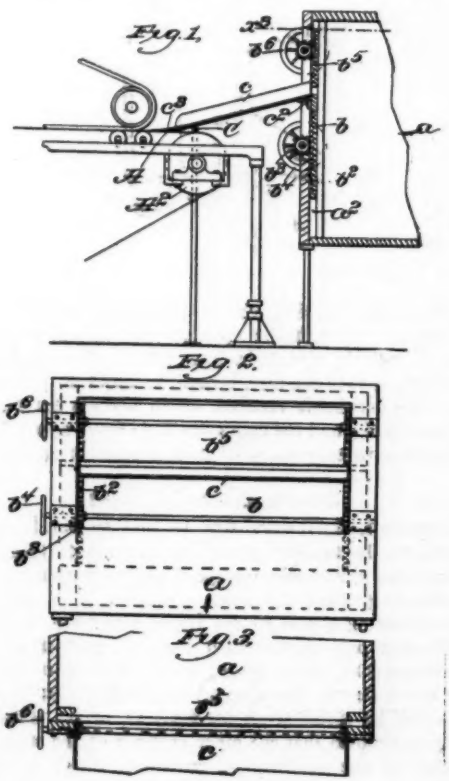


PLATE 5

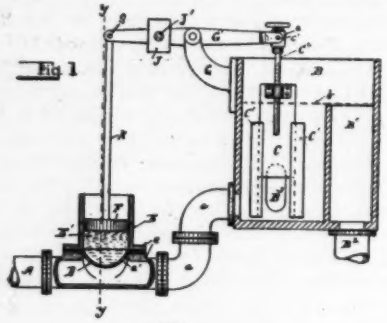
The desired end may be obtained without the intervention of the inclined trough by otherwise providing for flow of pulp under pressure or head.

Regulation by Pressure

U. S. patent 1,123,124 dated Dec. 29, 1914 to Harcourt makes use of the pulp pressure in actuating the regulating mechanism.

As shown in the drawing (Plate 6) the screw C^2, is operated to permit pulp to flow through the opening B^3, and a pump forces the pulp through the pipe A, into the box B, in sufficient quantity to

maintain the level of the pulp as indicated by the broken lines b, in Fig. 1. Should the pulp become a little thicker than when the gate C, was first opened, more pressure will be required to force it through the pipe A, and around the bends a, a, therein, and consequently the pressure will act to force a diaphragm D, upward, and thereby through the liquid E^1, in the cylinder E, force the piston F, upward in the cylinder E, and thereby, through the piston-rod H, and lever G^1, will sufficiently close the opening B^3, and maintain it so, while the thicker pulp is being supplied to the box B; thus reducing the volume of pulp passing through the opening



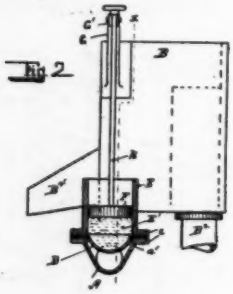


PLATE 6

B^3, to the screen machine, while not reducing the amount of fiber being supplied through the opening. When, however, the pulp passing through the pipe A, becomes thinner, the resistance caused by the bends a, a, in the pipe, become less, and the pressure in the pipe is correspondingly reduced, which permits the piston F, to move downwardly and the gate valve C, to move upwardly, thereby allowing the greater quantity of pulp to pass through the opening B.

Electric Control of Speed

U. S. patent 1,135,000 dated Apr. 13, 1915, to Donaldson controls the speed of the machine by means of a paper thickness gage which controls electrically the speed of the machine.

The drawing, Plate 7, shows a portion of a paper making machine including a part of the frame 5 and the take-off roller 6, which is a part of the paper carrying mechanism, and over which passes the newly made paper. The take off roller is rotated by an electric motor 8, having a belted connection 9, with a belt wheel 10, mounted on the shaft 11, of the take-off roller, and it is understood that the other portions of the paper carrying mechanism of the machine are preferably driven by the motor 8, so that all will be operated synchronously. The circuit wires 12 and 13, supplying current to the motor include a rheostat 14, having a switch arm 15, connected to the wire 12, which is adapted to be turned to engage the rheostats contacts 16, to insert or cut out the resistance units 17, forming part of the rheostat. A worm wheel 18, carried by the rheostat switch arm 15, is in mesh with a worm 19, mounted on the shaft of a rheostat motor 20, which controls the movement of the rheostat arm.

A lever gage arm 21, fulcrumed on the supplemental frame 22, is provided on its outer longer end with a rounded knob or projection 22, which rests upon the paper on the take-off roller so that any variation in the thickness of the paper will cause a movement of the gage lever. The opposite inner end 23, of the gage lever is positioned to swing between a pair of contacts 24 and 25, which are adjustably mounted on the supplemental frame and are connected by circuit wires 26 and 27, to the opposing coils 28 and 29, of a soleniod reversing switch 30. The return wire 31, connected to both coils 28 and 29, extends to a source of current supply and includes within its circuit a relay coil 32. The supplemental frame 22, is connected to a circuit wire 33, which completes the circuit just described. The solenoid switch is of the ordinary reversing type with three of its six contact posts connected to the rheostat motor 20, by wires 34, 35 and 36, and a fourth contact post extending to the line by wire 37. The remaining two contact posts are cross connected in the usual manner to reverse the current to the motor. This last mentioned circuit is completed by circuit wire 38, which leads to the line circuit (not shown). The contacts 24 and 25 are adjusted by means of the adjusting screw 39, which is provided with a right and left handed thread which engage the blocks 40 of which the contacts form a part.

From the description thus far given it will be seen that as the paper varies in thickness the gage lever will be swung to engage one or the other of the contacts and the resistance will be cut or inserted to diminish or increase the speed of rotation of the paper carrying mechanism and correct the variation indicated. By adjusting the distance apart of the contacts the gage lever is adapted to respond to any variation in thickness desired.

Assuming that the parts are in the position shown and that the paper being carried around the take-off roller should decrease in thickness the inner end of the gage lever will be swung upwardly to engage the upper contact and complete the circuit of the solenoid coil on the right and energize it and draw the solenoid switch to the right and connect the rheostat motor to turn in a direction to insert resistance. The completion of this circuit will also energize the relay coil and cause its armature to complete the rheostat motor circuit and the motor will rotate the rheostat switch arm to insert resistance in the circuit of the motor 8, and the speed thereof will be increased and consequently that of the carrying mechanism and the paper will become thinner. As soon as the paper becomes of the proper thickness the gage lever will be swung upwardly and break the contact and the circuit to the rheostat motor will be open. If now the paper should run too thin the connections will be

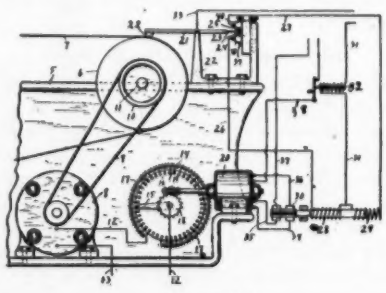


PLATE 7

made to cut out the resistance and the motor 8, speeded down to decrease the speed of the carrying mechanism and thus thicken this paper.

Control of Consistency by Frictional Resistance of the Stock

The invention of U. S. patent No, 1,178,193, dated Apr. 4, 1916 to Trimbey relates to a process and apparatus for regulating automatically the percent consistency of wet pulp as it is being pumped to the beaters or to mixing tanks, or of wet paper stock, as it is pumped to the head box of the paper machine, or of the Jordan engine, where it is to be further refined. Such

pulp or paper stock commonly consists of about 3 to 5 parts of bone dry matter in 100 parts of wet pulp or paper stock, and such percentage of bone dry matter is commonly referred to as the per cent consistency.

The apparatus comprises a stuff meter or regulating apparatus described in Patent No. 1,161,168, dated Nov. 23, 1915, with automatic means for controlling the supply of water and the dilution of the pulp to its predetermined lower consistency. Such stuff meter or regulating apparatus comprises briefly, a constant level chamber having a discharge orifice maintained

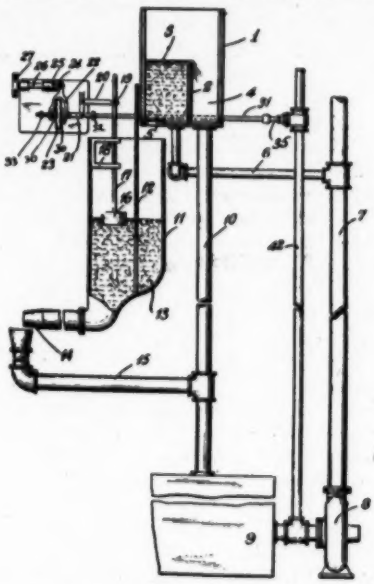


PLATE 8

under a constant head of the pulp or paper stock, and a variable level chamber arranged to receive the pulp or pare stock discharged from the orifice and provided with an outlet pipe of suitable size and proportion to cause a frictional resistance to the flow of the pulp or paper stock there-through, and thereby maintain a head of the pulp or paper stock within the chamber varying with its consistency and frictional resistance.

In the operation of the apparatus, Plate 8, the pulp or paper stock is circulated from the stuff chest 9, through the pump 8, to the main supply pipe 7, and a suitable portion is drawn off through the branch pipe 6, and introduced into the bottom of the compartment 3. The excess pulp overflows the partition 2, and returns to the stuff chest, thereby maintaining a constant head within the compartment 3. From the bottom of this compartment the pulp is discharged under this constant head into the variable level chamber 11. The rate of flow into this chamber is determined by the size of the orifice 5, and is relatively constant owing to the constant head and to the minimum of frictional resistance offered to the passage of the pulp through the thin orifice.

The head within the chamber 11 is largely controlled and determined by the frictional resistance opposing the flow of the pulp through the outlet therefrom. This frictional resistance will vary with the percent consistency of the pulp, the head increasing with the increase in consistency until it is sufficient to overcome the frictional resistance. The level of the pulp will accordingly indicate the consistency of the pulp, and will also indicate the amount of water which must be added to it to dilute it to a predetermined lower consistency.

Any increase in head of the pulp within the variable level chamber 11, will cause a corresponding rise in the float 16, thereby causing the operating rod 17, to act upon the double pawl 22, through the intermediate connection.

In the automatic relation of the apparatus, the parts will be so positioned and arranged that, so long as the percent consistency remains within the desired limits, no change in the position of the regulating valve, and the amount of water added, will be necessary. In this position, neither side of the double pawl will engage with the ratchet wheel 23. If the consistency of the pulp increases, the stem 17, will rise and will draw the link 21, and the double pawl 22, to the right, thus causing the left hand side of the pawl to engage with the ratchet wheel 23, and rotate this wheel. Since the wheel is prevented from moving sidewise by the stops 30, it will act as a nut upon the threaded rod 31, moving this rod to the left and opening the valve to a corresponding extent, thus admitting more water to the pulp which is being circulated. This water is advantageously added to the pulp at some point in the pipe line between the stuff chest and the regulating box or beater, so that its effect will be felt at the stuff meter as quickly as possible.

Should the percent consistency of the pulp or paper stock decrease, the stem of the operating rod 17 or 40 will be correspondingly lowered, with the result that the right hand side of the pawl 22, will engage with the ratchet wheel and move the valve to the right, thus decreasing the amount of the water supply.

As long as the consistency remains within the desired limits, the pawl 22, will be held in neutral position, so that no movement of the valve stem will take place. The stops 32 and 33, are in practice arranged so that when the valve is nearly wide open, or nearly closed, the corresponding stop will come into contact with the pawl 22, or will link 21, and thus disengage the pawl and prevent any further movement of the valve stem.

The following abstracts give a survey of the U. S. patents on feed regulation.

Historical Review

1. POHLS 7,497. July 9, 1850.

The invention consists in providing a movable lid in the regulator cylinder, the lid being operated by a screw to set the lid in the cylinder at any point desired to regulate the quantity of pulp to be admitted to make sheets of paper of various thicknesses. The movable lid is provided with an orifice communicating with the pulp chamber of the cylinder and with the atmosphere by a tube, at the bottom of which tube there is a small cylindrical air chamber with a ball fitting to move up and down to act as a valve, to allow the air to pass out by the tube when the pulp is forced into the cylinder, and to close the tube when the air is all forced out, then to allow the air to rush in when the discharge-gate is open, to assist in forcing out the pulp, and to do this with the utmost regularity.

2. KINSEY 15,852. Oct. 7, 1856.

Regulating the flow of pulp for making paper upon the web of cylinder of the paper machine by the pressure of the pulp in a box receiving its supply of pulp from the stuff chest and discharging it through an adjustable aperture below the surface of the pulp in the box, the presure being regulated and kept uniform by the height of the pulp in the box which is adjusted and maintained by means of a valve fitting the aperture operated by a float.

3. HAMEL 144,902. NOV. 25, 1873.

The invention consists of a tank, a float, and valves or gates, so contrived that by passing the stuff of which paper is made through it, as the stuff goes from the main holding tank or reservoir to the moving screen, upon which it is spread for forming it into sheets, the flow will be regulated according to the proportion of pulp to water, so that the sheets will be uniform in thickness throughout their length.

4. DUCKETT 150,545. May 5, 1874.

The inventin consists of a bent tube, one portion of which receives the pulp and contains a float, and the other portion communicates with the machine and with an overflow-tube leading to the place of supply, or reservoir, whereby, through the medium of the float, a single gate of the overflow-tube regulates the

feed to the machine. It also consists in making the float and overflow-gate adjustable relatively to each other.

5. HUTTON 155,027. Sept. 15, 1874.

When the pulp gets too thick it accumulates on a diaphragm, and by its weight, operating through the levers, opens the valve and allows water to flow in.

6. HUESTED 168,746. Oct. 11, 1875.

The invention consists of a float arranged within a tank or vat, and connected with a sliding or shifting plate by a combination of levers and other mechanism, in such manner that as the float rises upon the inflowing pulp or stuff, the inlet of which is located directly beneath, the rising of the float will communicate movement to the plate which governs the outlets, so that the outflow of the pulp is regulated on its way to the paper machine, or its excess diverted therefrom and directed to the reservoir, as desired, automatically. It also consists in a combination of a disk or wheel, provided with holes or graded apertures, the disk arranged in combination on the one side with the shifting plate, through the medium of cogs, and on the other side with the lever giving the movement, in such manner that the amount of throw or shift of the sliding plate my be regulated.

7. MACDONNELL 215,946. May 27, 1879.

The method of securing a uniform consistency of the stock or stuff while being fed to paper machines, consisting in the employment of a fixed volume of stock or stuff, in connection with a counter balance, and causing variations in the specific gravity of the pulp to control the addition of water thereto. In practice it is found that the specific gravity of the stuff or stock is greater than that of the water used to dilute it, and, consequently, that the weight of the contents of the stuff-box, although remaining the same in volume, will be greater or less, according as the proportion of water therein is increased or diminished. In order to make use of this fact, the stuff-box is mounted on a scale-beam, or otherwise supported so that it it is nicely balanced when filled with stuff of the exact consistency desired, and a water supply pipe and other parts are so arranged that whenever the material becomes too thin, and consequently lighter, the counter weight will elevate the box and cause the flow of water to be diminished, while at the same time the inward flow of stuff continues, so as to bring the contents of the box to the proper consistency. If, on the other hand, the material in the stuff-box should become too thick, and so much heavier than the proper consistency, the box and contents will overflow the counter weight and cause the flow of water to be increased, and thus restore the proper consistency.

8. HOLLOWAY 231,169. Aug. 17, 1880.

The invention pertains to Fourdrinier paper machines, and applies particularly to the location of the slices which control the flow of the pulp to the wire, to the arrangement of the apron whereby no adjustment of it is required when changes in width of paper are to be made, and to the arrangement of the deckles and their accessories.

9. BREMAKER 242,428. June 7, 1881.

This patent discloses the addition of certain cross partitions and slides near the ends of the breast roll box, for the purpose of regulating the height of the pulp in the screen-box, to prevent flooding and to regulate the flow into the breast roll box, which is further provided with a valve of perculiar construction to regulate the discharge of the pulp.

10. MACE 246,799. Sept. 6, 1881.

Heretofore a movable gate has been used to regulate the flow, and the paper weighed at intervals to determine the adjustment of the gate; but between these intervals the paper is liable to vary on account of the constant variations in the density of the stuff. The nature of the invention consists in the automatic adjusiment of the gate to the variations in the weight of the stuff as it is fed to the machine; and the invention consists in a combined feed box, balance, and gate.

11. YOUNG 276,127. Apr. 17, 1883.

The invention consists of a float gate to regulate the stuff supply; also of an improved gate adjustable upon a sliding support, and of another gate to discharge the stuff from the stuff box when it is desired to empty it.

12. STENGER 296,083. Apr. 1, 1884.

A regulating device for the uniform admission of the paper pulp and for the uniform dilution of the pulp by the spent or waste water, consisting of a disk with its connecting rod which causes two buckets to make a vertical up and down movement. A tilting motion is imparted to the two buckets at their highest point of vertical movement.

13. YOUNG 312,314. Feb. 17, 1885.

A stuff box provided with two outlets, one having a pivoted gate and leading to a paper machine and the other to the stuff reservoir, in combination with the pivoted gate, a hinged spring controlled chute which receives and transmits the stuff in its passage from the box to the machine, a pivoted sweep, and connecting links by which the chute acts upon the gate.

14. MACDONNELL 320,372. June 16, 1885.

The pulp is delivered from a chest or receptacle to an automatic mechanism by which its consistency is regulated, and from which it is delivered of an unchanging consistency to a feed mechanism, from which it passes to the paper machine. This valve or other feed controlling device by which the rate of delivery is increased or diminished is connected with and controlled by the paper machine, so that as the speed of the machine decreases the delivery of the pulp thereto will be increased to correspond, and vice versa.

15. SEIBERLING 323,079. July 28, 1885.

The invention relates to a construction of a vat, in which the rear making cylinder is elevated above the plane of the other cylinder or cylinders, whereby a single pump is made to force the exhaust water from all the cylinders back into the vat or mixing chamber, and whereby also a single pipe is made to connect both the upper and lower vats with the pump.

16. POTTER 337,080. Mar. 2, 1886.

A paper machine having a chute or box adapted to be moved by a variation in the weight of the stock, and two receiving compartments separated by an inclined gate, whereby the amount of stock flowing to the machine is varied by a change in position of box.

17. SMITH 394,306. Dec. 11, 1888.

The stuff regulator for paper machines has a pulp box and a pan hinged in the receiving compartment thereof and is provided with a projecting rod, a forked and counterbalanced lever, with which the rod of the pan engages, an extension gate secured to the lever, and an adjustable gate for regulating the flow of pulp from the receiver into the discharge compartment.

18. HATCH 409,201. Aug. 20, 1889.

The invention consists of a paper making machine having a vat in which the cylinder is located, the paper mold, a reservoir adapted to receive and hold a certain quantity of stuff and having an outlet controlled by a gate located at the spout, the gate and the regulating gate arranged at the opposite side of the vat in which the cylinder turns.

19. SCHOFIELD 422,979. Mar. 11, 1890.

Automatic attachments for opening and closing a stuff tap having a sliding valve, the attachment comprising a valve mover in line with the valve, a movable part swinging in front of the tap, and a support for both that is bolted to the flange of the stuff tap.

20. MCNAMAR 424,342. Mar. 25, 1890.

The object sought to be obtained by this patent is to deliver to each cylinder of a paper machine in which more than one cylinder is employed a separate and independent current of pulp, to so mix and dilute the pulp that the highest attainable degree

of homogeneity shall be obtained, and to so agitate and direct these currents that the fiber shall be laid and felted in the most promiscuous and homogeneous manner.

21. KELLOGG 444,555. Jan. 13, 1891.

The invention relates to the gate which governs the passage of pulp from the regulating box to a paper machine. These gates, which are usually made of copper to prevent corrosion, are mounted in ways upon one side of the regulating box in such manner as to be capable of vertical movement and cover an opening in the side of the box at or near the bottom thereof, through which when the gate is raised the semi-liquid pulp flows through a trough or other conductor to the machine. The height to which the gate is raised governs the thickness of the web of paper made by the machine, and so delicate is the adjustment which must be made in raising the gate that a variation of the one one-hundredth part of an inch in the height of the gate will cause a difference of more than one-fourth of a pound in a ream in the weight of the finished paper. It thus becomes necessary to provide means for raising and lowering the gate which will secure this extremely delicate adjustment of the latter, and the means heretofore employed has consisted of a simple screw rod turning in fixed bearings above the gate, the threaded end of which rod enters a nut secured to the gate. It has been found in practice that this means of raising and lowering the gate is not entirely reliable because of the lost motion incident to a screw rod however carefully made, and again, because the amount of lost motion is being constantly increased by the wear of the threads upon the rod and within the nut. This objection can be entirely overcome by combining with the screw rod and gate means for exerting a constant elastic pressure against the lower side of the nut, whereby its threads are pressed upwardly against the threads on the rod continuously, thus preventing lost motion between the threads regardless of the wear of the latter.

22. EDWARDS 445,985. Feb. 10, 1891.

In a stuff regulating apparatus for paper machines, the combination, with the stuff box having the usual inlet and overflow outlet for the stuff, of a well having converging sides and having at the bottom thereof an outlet passage and a gate for closing the passage, a conduit leading from the box to the well, and a water supply pipe leading into the conduit.

23. BRYANT 495,013. Apr. 11, 1893.

The invention in general consists of a receiving tank, into which the stuff is pumped or delivered, the tank being provided with a feed gate, a revolvable wheel, which is revolved by the stuff flowing on to it from the feed gate, and a governor operatively connected with the wheel and feed gate, whereby the speed at which the wheel revolves controls the distance the gate is open.

24. STOBIE & CUNNINGHAM 564,035. July 14, 1896.

A stuff regulator, comprising a stock tank, a water supply pipe discharging into the tank, the pipe having a cut-off valve and a regulating valve, a balanced stuff receptacle, a conduit leading from the tank to the receptacle, a regulating valve in the lower end of the conduit, and means connected with the balanced receptacle and each of the regulating valves, whereby both the upward and downward movement of the receptacle causes one valve to open and the other to close.

25. BAHN 565,665. Aug. 11, 1896.

A stuff regulator for paper making machines having a tank for receiving the pulp and water from the stuff chest and a discharge outlet to the paper machine, a gate for regulating the size of the outlet, a float in the tank, intermediate mechanism between the float and the gate for actuating the gate, and a loose connection between the float and the intermediate actuating mechanism, whereby the mechanism is operated only by a determinate rise or fall of the float.

26. BLASSER 567,636. Sept. 15, 1896.

The invention consists in pulp feeding construction for paper making machines which employs a feeding device by which the paper pulp is positively fed or carried onward in its movement from the stuff chest to the fan pump and a uniform pulp delivery secured, means for varying the speed of the feeding device preferably being provided so as to control the feed of the material as desired, and thus make the paper thicker and heavier or thinner and lighter by increasing or decreasing the speed. The invention includes, however, pulp feeding constructions not employing means for varying the speed of the feeding device, and an improved feeding construction which may be used in feeding other material than pulp, together with certain specific constructions and combinations of parts.

27. BOYNE 712,038. Oct. 28, 1902.

This invention relates generally to paper making machines of the Fourdrinier type, and particularly to mechanism for effecting exact and automatic regulating of the flow or feed of water to the screen. It consists of the combination of a pump, a supply pipe connecting the pump and the machine, an automatically actuated valve for controlling the passage of water through the pipe, and an escape pipe communicating with the supply pipe between the pump and the valve.

28. FOY 733,022. July 7, 1903.

A pulp vat for paper making machines having a ring with an opening and forming a valve seat, a flap rotatably mounted in the opening upon diametrically opposite trunnions, a flange along the margin of the opening at one side of the trunnions, a flange along the margin of the flap at the other side of the trunnions, an upwardly projecting lug on the flag adapted to contact with the flange on the ring to limit the turning of the flap upon its trunnions, and means controlled by the level of the contents of the vat for opening and closing the valve.

29. DIETRICH 767,210. Aug. 9, 1904.

The subject of this invention is an apparatus for the circulation of the liquid charged with paper stuff or pulp in paper or paper stuff mills with the object of insuring a uniform supply of such pulp water to the pulp catchers or sifters. It consists of a circulation tank, and a pulp catcher; interposed chambers, an overflow pipe connecting the circulation tank with the first interposed chamber, means for controlling the flow between the interposed chambers, a discharge pipe connecting the last interposed chamber with the pulp catcher, and a series of pipes connecting the discharge pipe with the pulp catcher a little distance above the bottom of the latter.

30. STEWART AND MCNAMARA 787,955. Apr. 25, 1905.

This invention relates to an automatic stuff regulating device, and the object of the invention is to govern the quantity of the paper making material supplied to a paper making machine irrespective of the speed thereof or of the percentage of fiber in the stuff supply, so that the sheet of paper may at all times be of a uniform weight and thickness. It comprises a measuring device, a stuff box and means for supplying the stuff thereto, a measuring receptacle, communicating with the box, and means for measuring a given quantity of the stuff fed into the measuring receptacle, a flow box, communicating with the stuff-box, and means intermediate the flow-box and measuring apparatus for automatically regulating the feeding of the stuff.

31. DANIELS 806,115. Dec. 5, 1905.

This patent contemplates the provision of means controlled by the speed of the machine for regulating the consistency and feed of the stuff, so as to assure it being at all times commensurate with the speed of the machine with a view of making the product uniform. The stuff feeder comprises a hopper having a vertical discharge at its lower end, a vertically movable, downwardly opening valve tapered toward its upper end and arranged in and adapted to control the discharge of the hopper and having an upwardly extending stem, a lever having one of its arms weighted and its other arm connected with the stem of the valve, and a mechanical governor connected with the weighted arm of the lever and adapted to be driven from a paper pulp engine, a paper making machine or an engine from which the paper pulp engine and paper making machine derive motion.

32. McNaught 809,073. Jan. 2, 1906.

The object of this patent is to provide in a head box adjacent the discharge apron thereof a mechanically operated flow regulator and relief device therefor whereby an efficient control of the delivery of the saturated paper pulp as received from a screen box or other source of supply is attained. Another object is to insure an even and uniform flow of the stuff to the paper making machine, together with quick operating means for the prevention of damage to the paper web in process of making by the clogging of the screen box, causing thereby a too meager pulp delivery, or from the subsequent rush and excessive delivery on the clearing of the screen box. A further provision is in the delivery regulating device of an adequate means for quickly stopping all flow of stuff from the head box to the paper making machine. This capability of the invention is of great value in emergencies requiring a discontinuance of the flow of pulp to the machine.

33. Eibel 851,227. Apr. 23, 1907.

This invention has for its object to construct and arrange the flow box and stock reservoir and its delivery orifice of a Fourdrinier machine in such manner that the stock will rise evenly and uniformly in the flow-box and will flow into and along the stock reservoir with little commotion, in a shallow stream maintaining a smooth and substantially constant surface, and will be delivered upon the wire with little or no commotion immediately in front of the stock reservoir, thereby permitting the fibers and other paper forming ingredients to begin to settle on the wire immediately, resulting in improving the formation of the paper on the wire and also in obviating springing or bending the small wire supporting rolls in front of the stock reservoir and, at the bottom of the stock reservoir.

34. Eichhorn and Campbell 874,946. Dec. 31, 1907.

This patent shows a feed box mounted substantially across the screen, and constructed of compartments telescopically connected and having a shaft running therethrough with spoon members thereon, whereby different colored material can be ejected from the several compartments to the stock passing thereunder.

35. Blanchard 888,060. May 19, 1908.

The object of the invention is to provide means for washing down the walls and partitions of the flow box of a pulp or paper machine, and beating down the foam thereon, and all by the use of a minimum amount of water through the pray pipe. It consists of a rotary shower pipe located above the surface of the stuff and adjacent to the partition thereof, and provided with a spiral arrangement of jet openings.

36. Sheehan 902,178. Oct. 27, 1908.

a series of guide rolls, an endless band of felt passing over the guide rolls, and through the press rolls, and means for initially

A machine for making millboard having a pair of press rolls, depositing a dilute mixture of pulped fiber and cement on the upper section of the endless felt, together with a distributing roll located over the felt near the point where the material is delivered to it.

37. Millard 933,656. Sept. 7, 1909.

In carrying out the invention, the machine is provided with means for causing the pulp to flow or travel from the supply tank to the wire, and may also be provided with means for regulating the velocity of flow of the pulp and causing it to approximately equal the velocity of movement of the wire. The velocity of feed movement may be accomplished by providing the feed tank, in which the pulp is kept stirred up, with an inclined runway which extends from the tank to a point over the wire where it leaves the breast roll of the machine, or with means for causing the pulp to flow under a head or pressure. For purposes of adjustment, the runway may be arranged so as to vary the inclination thereof, or a vertically adjustable dam may be employed to vary the head; or the head or pressure may be varied by any suitable expedient.

38. Schultz 943,165. Dec. 14, 1909.

A pulp regulator for paper making machines formed with a pulp box having a main partition the upper edge of which is V-shaped, a swinging gate pivoted to the partition and cooperating with the V-shaped edge thereof in regulating the flow of pulp, a float, and connections between the float and the gate for varying the opening between the upper edge of the partition and the gate.

39. Gaara 951,183. Mar. 8, 1910.

In a paper making machine the combination with the stuff chest and the machine wire, of a tank containing a straining cylinder interposed in the path of flow of the pulp water from the chest to the wire and means to conduct some of the water, after its passage through the wire, back into the tank.

40. Inglish 952,808. Mar. 22, 1910.

The controlling device is arranged in the feed pipe of the paper machine, and consists essentially of two perforate members adjustable one relative to the other, to control the amount of pulp flowing through the opposite perforations.

41. Schultz 955,558. Apr. 19, 1910.

A pulp regulator for paper making machines provided with a pulp box having an entering compartment, a discharge compartment, and an overflow compartment, the box being constructed to allow the pulp to flow from the entering compartment into the discharge compartment and overflow compartment, a float in the entering compartment, a shaft operatively connected with the float shaft, and a gate controlling the flow of the pulp to the discharge and overflow compartment and operatively connected to the shaft upon which the float is mounted.

42. White 989,461. Apr. 11, 1911.

The object of the invention is to construct a paper making machine of the fourdrinier type so that the feed end of the machine can be adjusted vertically to a considerable height to give a more rapid flow to the paper stock than heretofore, as it passes from the mixing box.

43. Ziemann 1,019,580. Mar. 5, 1912.

A feed regulating mechanism for paper making machines provided with a pressure box having a pulp discharging opening, a valve for regulating the size of the opening and a valve operating mechanism arranged in the box and adapted to be connected with a moving part of the engine whereby the position of the valve is automatically regulated to control the flow of the pulp from the box according to the speed at which the machine is working.

McIntyre 1,026,819. May 21, 1912.

A paper machine is provided with a flow box for supplying paper stock to the machine, and a distributing box connected to the flow box, and a slotted reciprocating gate interposed between the flow box and the distributing box adapted to permit or prevent the paper stock from one of the boxes to the other.

45. Beecher 1,088,679. Mar. 3, 1914.

In a paper making machine, a pulp box having an outlet; a valve controlling the outlet; a float; a lever; connections uniting the ends of the lever with the valve and with the float; a pivotally mounted fulcrum block in which the lever is slidable, the lever having a pair of lugs located upon opposite sides of the block and between the connections; a screw threaded into the block and movable in the lugs, the screw extending upon both sides of the block and constituting a truss for the lever; and nuts threaded upon the screw and adapted to engage the lugs.

46. Harcourt 1,123,124. Dec. 29, 1914.

The invention relates to paper making machinery which is designed to convey the prepared pulp from the source of supply to the screen machine, and has for its object the providing of automatic mechanism adapted to control the flow of prepared pulp into the screen machine, which will be actuated by the consistency of the pulp. The apparatus consists of a pulp box having an opening through which pulp may flow to a paper making machine, a gate to control the opening, a pipe for supplying pulp to the box, cylinder and piston mechanism communicating with the pipe adapted to be actuated by pressure within the pipe, and mechanism operated by the piston adapted to actuate the gate.

47. 1,134,831. Apr. 6, 1915.

The invention has for its object to provide a stuff box for use in paper machines having means actuated by a float for regulating the flow of the stock to a paper machine and for returning the surplus stock to the chest. Additional means are provided for adjusting the first mentioned means for the manufacture of paper of different weights and for regulating the flow of the stock with reference to the speed at which the paper machine is driven.

48. DONALDSON 1,135,000. Apr. 13, 1915.

It is one of the objects of the invention to provide a means for automatically regulating the thickness of the paper being manufactured which may be adjusted to respond to the slightest variation in thickness and will insure a constant run of paper of uniform thickness. A paper thickness regulator is provided which automatically controls the speed of rotation of the paper carrying mechanism. A further object of the invention is to provide a paper thickness regulator in which the paper is constantly gaged so that the slightest variation will be indicated and the motor driving the carrying mechanism will be controlled to regulate the speed of the carrying mechanism and thus regulate the thickness of the paper being manufactured. The apparatus comprises a paper thickness responsive device in contact with the paper, a motor for actuating the paper carrying mechanism, and means actuated by the responsive device for controlling the speed of the motor to thereby control the speed of the paper carrying nechanism.

49. FRENCH 1,140,029. May 18, 1915.

The invention contemplates the provision of self-adjusting means adapted to engage the web of paper and co-operating with a liquid which controls the operation of electro-responsive means, arranged to control the actuation of the stock-gate to regulate the amount of stock delivered to the paper making machine.

50. FEENEY 1,143,523. June 15, 1915.

The invention has for its object to provide a stuff box for paper making machines having means to direct back to the chest all surplus stock before the surplus has sufficiently accumulated to increase the pressure at the outlet leading to the mixing box. It consists of a mixing box, a stuff box having an outlet to the mixing box and an inlet, a second outlet for the stuff box with its outer end extending upwardly, and a relief valve at the outer end of the second mentioned outlet.

51. MCCURDY 1,154,788. Sept. 28, 1915.

In paper making machinery the combination of a flow box; a traveling mold; deckle straps co-operating with the mold; a sluice way having the forward edge of its bottom reaching to a point close to and above the upper surface of the mold and between the deckle straps and its rear end adapted to receive stock from the flow box; and means for supporting the sluice way so that it may be tilted to varying angles to the horizontal on an imaginary axis located substantially at the aforesaid forward edge.

52. BROWN 1,157,204. Oct. 19, 1915.

A paper making machine provided with a paper thickness gage mounted at a point in the machine where the paper is sufficiently formed to determine its thickness together with operable mechanism controlled by the movement of the gage to change the amount of paper stock fed to the machine to keep the thickness of the paper made within desired limits.

53. DILLMAN 1,166,042. Dec. 28, 1915.

A stuff box for feeding pulp to paper making machines comprising a compartment for receiving the pulp, a compartment for feeding the pulp and receiving the pulp in regulated quantity from the receiving compartment, an overflow compartment receiving the surplus pulp from the receiving compartment, a by-pass connecting the feeding compartment with the overflow compartment, and means actuated by the change of level of the overflow pulp from the receiving compartment into the overflow compartment for regulating the discharge of surplus pulp from the feeding compartment through the by-pass into the overflow compartment.

54. TRIMBEY 1,178,193. Apr. 4, 1916.

An automatic regulating apparatus for wet pulp and wet paper stock, comprising a constant level chamber having a discharge orifice maintained under a constant head of the pulp or paper stock, a variable level chamber arranged to receive the pulp or paper stock discharged from the orifice and provided with an outlet of suitable size and proportion to cause a frictional resistance to the flow of the pulp or paper stock therethrough, and thereby maintain a head of the pulp or paper stock within the chamber varying with its consistency and frictional resistance, and means actuated by variations in the head of pulp or paper stock in such variable level chamber for automatically regulating the addition of water to the pulp or paper stock.

55. TRIMBEY 1,178,194. Apr. 4, 1916.

A regulating apparatus for wet pulp and wet paper stock, comprising a constant level chamber having a discharge orifice maintained under a constant head of the pulp or paper stock, a yieldably supported variable level chamber arranged to receive the pulp or paper stock discharged from the orifice and provided with an outlet pipe of suitable size and proportion to cause a frictional resistance to the flow of the pulp or paper stock therethrough, and thereby maintain a head of the pulp or paper stock within the chamber varying with its consistency and frictional resistance, and means in connection with the yieldable support for indicating variations in the head of the pulp or paper stock in the chamber.

56. TRIMBEY 1,178,973. Apr. 11, 1916.

Regulating apparatus for wet paper stock comprising a regulating box provided with an overflow dam for maintaining a constant head of the paper stock therein and with means for supplying the paper stock thereto and for removing the overflow therefrom, the regulating box being further provided with an outlet pipe or spout of suitable length and cross sectional area to offer a frictional resistance varying with the paper stock consistency and to give an outflow velocity and volume of the paper stock therethrough approximately inversely proportional to the paper stock consistency, whereby an approximately constant equivalent weight of dry paper stock is discharged therethrough per unit of time in an automatic and continuous manner.

57. BISHOP 1,181,726. May 2, 1916.

A stuff regulator comprising a stuff chest, means for delivering the stuff from the chest to the box embodying a conduit and a pump, and means for introducing a stream of water into the conduit between the pump and the chest, so that the water will be mingled with the pulp as it is pumped into the box, and means controlled by the variations in the density and lateral flow of the pulp in the box for varying the quantity of water introduced, means being provided for delivering the stuff from the box to the paper making machine.

58. WALLIN & GRANQVIST 1,186,629. June 13, 1916.

The invention refers to a method used in the manufacture of paper by machinery consisting in causing the water running from, or pressed out of, some part of the wet portion of the machine to act upon a registering device for indicating the thickness of the pulp in the machine, or a regulating device for controlling the supply of pulp to the machine, or both.

59. WARNER 1,225,086. May 8, 1917.

The method of regulating the consistency of pulp stock which consists of automatically adding water to the stock in proportion to its density as indicated by the deflection of a hinged paddle that revolves through it.

60. WITHAM 1,233,738. July 17, 1917.

In carrying out the invention two pairs of electrodes, one in each line of a shunted electric circuit, are suspended in the pulp feed tank. Each pair of electrodes is connected in series with a resistance, one of the resistances being preferably variable. Bridged across the shunted circuits, connecting the electrodes and the resistance in each circuit is the field coil of a motor. A galvanometer may be connected to register in terms of density

in parallel with the motor field. The motor whose field is bridged across the electrode circuits may operate a fly ball governor to open or close a valve controlling the pulp feed opening, according to the speed at which the motor is run. When pulp is introduced into the feed tank an electric circuit flows across the gap between the electrodes, the amount of current varying inversely with the resistance of the pulp. This variation produces a corresponding variation in the speed of the motor to operate the feed valve.

61. Witham & Mayo 1,248,972. Dec. 4, 1917.

The invention comprises an air container, open to the pulp in the lower side only, rigidly suspended in the stuff box. The air container is connected with a source of compressed air from which it is kept constantly supplied. The pulp is prevented from entering the container by reason of the air pressure therein, while air is allowed to continually escape from the bottom of the container into the pulp. A second air pipe communicating with the container and connected with an air-operated mechanism for opening and closing the valve controls the feed from the stuff box to the Fourdrinier screen. As pulp of varying density offers greater or less resistance to the escape of air from the container, pressure in the container will be less or great and this pressure will be communicated to the air-controlled valves-operating device to close or open the valve.

62. Jakab 1,251,381. Dec. 25, 1917.

An automatic controlling means for the stuff box of a paper making machine, comprising a stuff box having an outlet in its forward wall, a controlling valve for the outlet, partitions within the box forming receiving and discharging compartments therein, an inlet for stock into one of the compartments and an outlet from the adjacent compartment, a controlling slide between the compartments, associated hinged lids for the box operatively connected to the slide adapted for opening simultaneously with the opening of the lids, and operating connections between the valve and slide.

63. Carlstedt 1,317,956. Oct. 7, 1919.

The invention relates to a means for automatic control of the kind having an element connected with a main regulator or controller for that which is to be regulated, which element is under the influence of a non-compressible liquid, such as water, oil, or the like, permanently flowing in a conduit, the flow of the liquid being checked by the influence of that which is to be regulated by means of the main regulator or controller, in order in this manner to effect variations in the influence of the liquid on the element and thus to effect adjustment of the main regulator or controller connected with the element. The liquid permanently flows out through a discharge nozzle on the conduit, before which nozzle a movable member such as a shield, cup or the like is arranged, which member is caused to move toward or away from the orifice of the nozzle by that which is to be regulated, thus checking the outflow of the liquid. The member, shield, cup or the like may be connected with the device or the like may be connected with the device or the like to be regulated, or otherwise actuated by whatever is to be controlled. For regulating the pulp sheet supplied to a paper machine the cup may be attached to an arm supported by a roll movable in vertical direction and rolling on the pulp sheet. When the apparatus is used for regulating steam or gas flowing through a pipe or a conduit the cup is attached to a pressure-box or a piston actuated by the pressure in the conduit. For governing the speeds of machinery the cup may be connected, with a centrifugal governor, and for regulating an electric current with the armature of a magnet or a solenoid.

64. Hardy 1,322,016. Nov. 18, 1919.

This patent shows a tank having an outlet, an elbow connected to the outlet, a pipe leading from the elbow, a vertically extending basiin connected to the lower end of the pipe, a float mounted within the basin, a valve, pivotly mounted within the elbow, a crank arm connected to the valve, and links connecting the crank arm with the float, whereby when the float is raised or lowered the valve will be opened and closed.

65. Feeney 1,331,057. Feb. 17, 1920.

An apparatus comprising a stock circulating mechanism embodying normally separated compartments, one to receive and the other to return stock to the source of supply thereof; a spillway normally establishing communication between the compartments; a chute for delivering stock from the compartment receiving the stock from the supply, the chute extending above the spillway; a gate for normally closing the spillway and for regulating the supply to the chute, the gate having a gage-opening therein for regulating the supply to the chute; a float member for supporting the gate; and means for varying the flotation of the float member.

66. Allen & Trimbey 1,357,760. Nov. 2, 1920.

The process of mixing paper making ingredients to form a stock suitable for delivery to paper making machines which consists in making fluid mixtures or solutions of the several ingredients of the stock, continuously pouring the fluid mixtures or solutions so prepared into a common stream, and proportioning the volume delivered by the individual streams to cause their union in the common stream to form a paper making stock of the desired compositions.

67. Decker 1,374,286. Apr. 12, 1921.

The stuff regulator consists of a hinged through mounted in connection with a regulator box so as to receive the discharge therefrom, and a weighted arm fulcrumed above the trough and adapted to automatically introduce water to the stock tank, when the pulp is too dry and sluggish, and to check the introduction of water thereto when the pulp is sufficiently fluid. In connection with the hinged trough, a liquid pressure cylinder is employed vertically mounted so that the raising and lowering of the piston therein, by which the water supplied to the tank is alternately accelerated and checked, respectively, is caused by an increase or decrease of the liquid pressure beneath the piston.

68. Fensky 1,397,415. Nov. 15, 1921.

This invention relates to weighing means for pulp machines, the principal object of the invention being to provide means for delivering a stream of pulp of uniform weight to the mixing box from the stuff box, the weight of the stream being kept uniform by automatic action.

69. Hardy 1,406,009. Feb. 7., 1922.

A paste regulator for paper making machines comprising a reservoir, an outlet leading therefrom, a basin attached to the outlet, a gate arranged within the outlet and consisting of angularly disposed integral sections, a float disposed above the upper end of the basin and extending therein, an arm actuated by the float, a rod pivoted to the gate and adjustably connected to the arm for adjustably supporting the gate, and means operatingly connecting the arm with the float.

70. Boivan 1,408,977. Mar. 7, 1922.

A stock box having an outlet cone, a bulb controlling the escape of the stock through the cone, a rod connected to the bulb, a second bulb fixed on the rod and acted on by the weight of the stock to rise and fall, and counterweight means connected to the upper end of the rod.

71. Decker 1,423,555. July 25, 1922.

An apparatus comprising means for producing a continuous mixture of groundwood and sulfite, and means for automatically regulating the consistency and percentage.

72. Allen 1,430,427. Sept. 26, 1922.

A valve mechanism comprising a valve element having an annular port, an annular element for closing the port and means for relatively moving the elements to vary the flow of fluid through the port.

73. Hilaman 1,442,272. Jan. 16, 1923.

This invention relates to an improved stock regulator for a paper machine and one object of it is to provide a regulator having means for movably mounting a hopper receiving the stock

from a conveyor spout and means for operating a closure at the inlet end of the spout; the actuating means for the closure being connected with the suspending means for the hopper so that when the hopper moves vertically, the closure may be opened or closed according to the direction in which the hopper moves. The supporting or suspending means for the hopper are so constructed that the hopper and a predetermined amount of stock may be counter-balanced and the hopper thus permitted to move upwardly or downwardly according to whether the amount of stock in the hopper is more or less than the predetermined amount. The actuating means of the closure are so connected with the suspending means of the hopper that the door may be normally held open a predetermined amount and then closed or opened to a greater extent that the hopper moves.

74. Hockman 1,451,659. Apr. 10, 1923.

In accordance with the invention there is provided a suitably subdivided tank connected to a stock pump in such manner that the stock enters one compartment of the tank and overflows into another compartment while water is admitted to the first compartment for mixture with the stock therein to thin the latter. Provision is made for causing the stock, should it become too thick, or should it be desired to empty the compartment, to return to the stock chest.

75. Butterfield & Otterbein 1,453,438. May 1, 1923.

The invention relates to a device consisting of a signal and recording meter and automatic controlling device for use in connection with paper making machinery. It consists essentially of a metering instrument cooperating with the newly formed web of paper travelling over the forming, drying and finishing rollers of a paper forming machine, whereby the variable thickness of the paper will be constantly indicated on suitable signals for the guidance of the operator and will also be recorded on a suitable record, which will show any variations in the paper from any given dimension required in the paper produced. Such records provide indisputable evidence as to the uniformity of the stock run on any job or lot of paper, as they show the degree of the variations in thickness throughout the entire quantity run. These records are carefully noted at intervals and upon the completion of the job are filled for future reference in event that questions are raised by customers or otherwise relative to the uniformity of the stock from which the record has been obtained. The practice in paper manufacturing heretofore has been for the attendant of the machine to make frequent observations of the paper in process of formation to determine how the stock was running as to specifications. These observations are usually made by puncturing the sheet or web and calipering the paper to determine its thickness. This method is far from satisfactory for reasons well known in the paper making industry.

76. Clutch 1,466,120. Aug. 28, 1923.

A paper making machine comprising a slice bar, vertically adjustable brackets for supporting an apron; the apron and means to adjust the apron horizontally relative to the slice bar.

77. Butterfield & Otterbein 1,479,786. Jan. 8, 1924.

The process of paper manufacturing consisting in delivering the raw material to the wet end of the machine in substantially the quantity required to form a paper web of predetermined thickness, in causing the web so formed to come in contact with a metering instrument to actuate it to produce indications to make a record of the mean thickness of the paper showing the plus and minus variations therefrom and to cause automatic regulation of its thickness.

78. Hilaman 1,482,991. Feb. 5, 1924.

The invention relates to a stock regulator for use in connection with paper machines and one object of the invention is to provide the stock regulator with means for controlling feeding of the stock and to further provide improved means for preventing splashing of the pulp against the sides of the spout leading to the pulp bucket and also prevent splashing of the pulp against the sides of the upper portion of the pulp bucket. Means for controlling upward and downward movement of the pulp bucket and an improved type of gate for controlling passage of the pulp through the gate leading for the pulp box into the spout leading to the pulp bucket are provided, this gate being adjustably connected with a cross bail carried by arms from which the pulp bucket is suspended.

79. Yates 1,506,280. Aug. 26, 1924.

It is the especial object of the invention to provide a regulator by which variations in the consistency of the stock supplied to the box may be automatically equalized, the gate adjustment having been once set for a given run remaining fixed so that this adjustment does not have to be changed and an even equal run of stock through the gate may be obtained. This object is effected by so delivering the stock that the head or pressure of the stock is varied as the stock increases or decreases in thickness, so that when the stock is thick the stock is delivered under less pressure and thereby in less volume per unit of time, and when the stock is thin the pressure is increased so as to deliver the stock in greater volume per time unit, and thus equalize the pulp content of the stock at the wire, so that having a given gate adjustment the pulp content of the stock delivered is the same whether the stock be thick or thin.

80. Russell 1,534,080. Apr. 21, 1925.

In a flow box for paper making machines, means for diverting the flow of the pulp into two streams, means for rotatably adjusting the diverting means, means for imparting vertical movement to the diverting means, means to bring the streams together, and adjustable means to control the flow of the mixture to a travelling wire.

81. Wallace 1,544,705. July 7, 1925.

A pulp box formed with a pulp receiving compartment communicating with the upper compartment whereby the overflow of the pulp is delivered to the second-named compartment, a hopper communicating with the upper compartment and designed to discharge into the lower compartment, float means in the hopper link-connected to a valve in turn connected to the supply pump whereby on the float being raised water is delivered automatically by the pump to thin the pulp and facilitate the flow thereof into the lower compartment.

82. Beadle 1,577,555. March 23 1926.

An apparatus for regulating the consistency of a flowing liquid comprising a valve for controlling the admission of water thereto, means for actuating the valve to vary the rate of flow of the water, and means for diverting a continuous stream from the liquid and causing the stream to strike the actuating means, causing an impact there against which serves to control the position of the valve; the force of the impact varying inversely with the consistency of the liquid.

83. Aldrich 1,584,345. May 11, 1926.

The head box is provided with a spout or nozzle extending from the box to the table and arranged to discharge material upon the wire, means are provided for controlling the flow of material from the box to the spout and means for controlling the flow of material from the spout to the wire.

84. Hall 1,600,731. Sept. 21, 1926.

Fibrous pulp of a given consistency is fed into a primary bulk supply having an overflow which controls the level of the pulp solution therein, and therefore the amount of pulp. At predetermined periods, the valve on the primary bulk supply may be automatically opened, and all or any part of the entire contents thereof may be discharged into a mixing tank from which it may flow preferably by gravity, to one end of the felting tank. From the opposite end of the felting tank the excess portions of the pulp solution may be withdrawn, preferably by means of a pump, and may be forced to the mixing tank. Flow of water into the mixing tank may be automatically governed by a float valve, serving to maintain a very nearly constant level in the felting tank. By this arrangement it is possible to positively control the amount and weight of pulp introduced to the mixing and felting tanks from

the primary bulk supply, as well as the amount of water introduced and simultaneously therewith, maintain a cyclic circulation of the pulp solution between the mixing and felting tanks.

85. Bucking 1,610,742. Dec. 14, 1926.

In a paper making machine a plurality of upright pipes, means to feed a supply of pulp liquor to the pipes in the ascending direction, means on the pipes adapted to produce whirling and eddying movement of the liquid, and a horizontal wire cloth adjacent the upper end of the pipes and operatively associated therewith.

86. Sheridan 1,619,682. Mar. 1, 1927.

In an apparatus for regulating the flow of pulp consisting of a vat having an outlet in the bottom thereof, a pipe mounted in the outlet and projecting into the inside of the vat, the pipe having an opening in the side thereof near the outlet of the vat, a second pipe suspended in the first pipe, and means for raising and lowering the second pipe in the first pipe to regulate the flow of pulp through the opening in the first pipe into the outlet of the vat.

87. Allen 1,620,860. Mar. 15, 1927.

A process for making paper consisting in automatically effecting and maintaining the consistency of certain stock ingredients, as the ground wood pulp, near its source of supply, in effecting continuous delivery of the stock so regulated to a common stream for mixing stock ingredients, and in maintaining a continuous flow of the mixed stock directly to the paper making machine.

88. Aldrich 1,629,088. May 17, 1927.

This invention relates to a mixer especially adapted for use in the flow box of a Fourdrinier paper making machine and has for its primary object to provide a mixer characterized by the provision of a plurality of perforated boards or plates mounted in circumferentially spaced and radial arrangement and adapted to be rotated. This mixer, has greater capacity and surface for mixing and agitating the stock or pulp than prior mixers used for this purpose. It is self-cleaning and it will function very effectively in breaking up soft lumps of pulp and in maintaining a uniform consistency of the stock.

89. Lewellen & Lewellen 1,643,716. Sept. 27, 1927.

A paper making machine provided with a thickness guage having a contact member movable when the paper thickness varies, a movable element for regulating the amount of stock fed to the machine, a motor for operating the movable element an electric circuit, reversing switches operated by the contact member, and a separate switch operated at regular intervals for causing the motor to operate in event one of the reversing switches is closed.

90. Heisel 1,648,229. Nov. 8, 1927.

A paper making apparatus comprising a flow box having an outlet opening, a wire supporting breast roll positioned adjacent thereto; a flow-controlling inlet pivotally mounted adjacent the outlet opening and overlying the breast roll and adapted to direct the flow of stock from the flow box through the outlet opening onto the wire, and means for swinging the inlet upon its pivotal mounting from its normal position overlying the breast roll to permit removal of the breast roll.

91. Schur 1,653,125. Dec. 20, 1927.

A process of ascertaining the slowness of aqueous pulp, which comprises constantly supplying a stream of such aqueous pulp to form a pool thereof, partially submerging a continuously moving screen in such pool and causing the solid component of such pulp continuously to form in a layer on the screen and the liquid component to pass through such layer, maintaining a substantially constant concentration of the aqueous pulp in the pool and simultaneously indicating variations in the thickness of such layer and in the rate of flow of such liquid there through.

92. Witham 1,662,226. Mar. 13, 1928.

In a paper making machine the combination with the web forming part, of a head box for the liquid stock and having an opening in the front wall thereof, a nozzle apron and slice adjustably mounted as a unit on the wall over the opening therein, and a compartment in the head box communicating with the latter and the nozzle, the compartment having walls extending upwardly above the nozzle and slice to provide a pond or storage space in which the lever of the liquid stock may be maintained above the nozzle, slice, and web forming part.

93. Van De Carr 1,665,425. Apr. 10, 1928.

In carrying out the invention a vat or reservoir is provided within which is mounted a screening device, preferably in the form of a rotatable hollow cylinder, the outer wall of which is made of mesh wire or screening material. Communicating with the interior of the cylinder is a discharge outlet. The stock to be regulated is withdrawn from any suitable part of the pulp system, and is fed into the vat through an orifice, preferably positioned near the bottom of the vat. Between the end of the vat wall and the perforated wall of the cylinder, is located a baffle, adapted to prevent eddying of the material within the vat. The lower edge of the baffle is spaced from the bottom of the vat. Mounted between spaced guides, is a float which is adapted to regulate a source of fluid supply connected to that part of the system from which the stock is taken. Suitable means are provided for taking off the stock adhering to the walls of the cylinder and returning it to the stock supply.

94. Sall 1,669,307. May 8, 1928.

This invention relates to a feeding device operating with a ratchet gear adapted to be used in combination with automatically operating regulating devices. It relates to ratchet gears of that type in which a number of engaging members, for which a controlling device is provided, are mounted on a common oscillating carrier. The carrier and controlling device are independent of one another and the controlling device so arranged, that when occupying a normal position prevents the engaging members from entering into engagement with a motion transmitting member but when shifted to other positions permits some one of the engaging members to enter into engagement with the motion transmitting member, the direction in which the member last mentioned being moved, being dependent on the engaging member which is operative.

95. De Zurik 1,669,412. May 15, 1928.

An object of the invention is to provide a stock consistency regulator, comprising members suspended in the flowing stock at different locations, and adapted to be actuated by the movement thereof, each member having a connection with an indicating means whereby the consistency of the stock will be indicated, one of the members having a connection with a source of water supply, whereby, when the stock thickens to a predetermined degree, water will be automatically added and thoroughly intermixed with the stock before it reaches the second member, and conversely, if the supply of stock to the regulator becomes thinner, where it reaches a predetermined degree of thinness, the supply of water thereto will automatically be cut off, thereby causing the stock, as it is discharged from the regulator for delivery to the paper making machine, to be of uniform density, the second member indicating the density of the stock as it is discharged from the regulator.

96. Hamilton 1,674,720. June 26, 1928.

A machine for producing continuous sheets of paper provided with an apparatus for automatically causing the paper thus produced to conform to a substantially constant thickness comprising a device for continuously detecting minute variations in the thickness of the paper as it is produced by continuously weighing the paper, and means controlled by the measuring device for regulating the speed of the producing machine.

97. Spoor 1,689,755. Oct., 1928.

In a paper stock control means, the combination with the Jordan beater and stuff supply box therefore, a regulating supply chest delivery connections from the Jordan beater to the regulating supply chest a counterbalanced hopper with restricted discharge opening, a delivery pipe from the regulating chest to the counterbalanced hopper, a water supply pipe, and a valve with connections to the counterbalanced hopper, to control the water supply.

Section of the

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Edited by
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Standard Costs*

By Harold E. Parkman[1]

Before discussing standard costs, let us briefly review the objects of cost accounting. These are three: to determine selling prices that will yield a fair return on the investment; to form a basis for ascertaining the result of operations; and to aid in the executive control of costs.

The company with which I am connected formerly operated a job order cost plan which was quite satisfactory as a means of determining what prices were profitable, and finding the results of current operation, but in order to control costs so much detailed study was required that by the time the findings were made they were usually of little value. Standard costs have now given us a considerable degree of executive control over costs.

What a Cost Standard Is

Let us consider what a cost standard is. It need not be an ideal cost, for it is simply a relative value by which to measure the efficiency of the plant's activity.

In outlining the steps of setting standards and operating a standard cost plan, I shall not attempt to show their detailed application to the business of manufacturing paper, but shall draw the examples from general practice, or the woolen industry with which I am more familiar.

Whether on a standard basis or otherwise, cost may be conveniently divided into the elements: material cost on the one hand, and labor and burden, or manufacturing cost on the other. This division is useful in tracing cost charges due to varying material prices, and in determining selling prices that will yield a fair return. The profit on the manufacturing element should be sufficient to give a satisfactory net return on the plant facilities that make the operations possible, and since this rate of turn-over is in this industry slower than the rate for the material element as related to investment in inventories the profit expressed as a per cent of sales for the former element, should be considerably higher than for the latter.

Steps in Setting Standards

The steps in setting standards of manufacturing cost are compiling:

1—Organization standards, or the personnel necessary to operate each department at full capacity.

2—Expense standards, or the payroll expenses of the standard organization, plus supplies, repairs, and other charges necessary for full operation.

3—Production standards, reducing each product in a department to a common unit, usually a machine or man hour.

Illustration:

STANDARD ORGANIZATION AND EXPENSE SCHEDULE

Department A

Foreman, 48 hours per week	$48.00
Laborers (3), 144 hours per week	72.00
Supplies	5.00
Repairs	20.00
Fixed charges	50.00
Distributive departments	93.00
	$288.00
Operating hours	96.00
Standard rate per machine hour	3.00

Standard Product cost, Operation A.

Product D—50 lbs. per machine hour = .02 hours per lb. at $3.00 per hour = $.06 per lb.

To Insure Later Cooperation

To insure later cooperation, all these standards should be set with the knowledge and consent of the plant superintendent and the foreman involved.

Material cost standards for paper may be drawn by assuming a standard furnish, pricing at an estimated average cost to cover the period of a year, and dividing by the estimated yield for that particular stock.

Variations from standard are computed from the following. Standard quantity at standard price = Actual quantity at standard price — Variation due to quantity used. A. Actual quantity at standard price — Actual quantity at actual price = Variation due to price.

Applicable to the Paper Industry

While there are other methods of handling material prices, it is believed that this is applicable to the paper industry.

Manufacturing cost variations for each department are computed from the data now shown.

A simple analysis:

Standard production at standard cost — Actual production at standard cost = Unearned burden.

Budgeted department cost — Actual department cost = Burden variation.

A More Detailed Analysis

A more detailed analysis sometimes is worth while; as illustrated by the next example, in which the quantities are the cost allowed for each item under the varying conditions. The first item is computed by converting all the production of the period into the common unit, say standard hours, and from the standard hour rate for each item of expense converting this production to a dollar allowance.

A = Standard allowance for the production of the period.

* Address delivered at the Inter-State meeting of the Kalamazoo Division of the Cost Association of the Paper Industry and the Paper Technologists' Club, Kalamazoo, Mich., May 17, 1929.

[1] F. C. Huyck & Son, Kenwood Mills, Albany, N. Y.

B = Standard allowance for the hours actually worked.
C = Standard allowance for the full possible operating hours of the period.
D = Actual hours worked by this class of operator, at the standard hour rate for this job.
E = Actual cost of the item for the period.

For the variable items of labor the following variances are computed:

A-B = Variance due to greater or less than standard speed of production—or productive efficiency.
B-D = Variance due to employing operatives more or less than the standard time required for the machine operating time—or labor time variation.
D-E = Variance due to rates of pay.

For the fixed items of department payroll, such as the foreman, and other fixed expense, we analyze in this way:

A-B = Productive efficiency variance.
B-C = Variance due to idle machine time.
C-E = Variance due to rate of pay.

Summary for the Whole Plant

From these formulae we compute the variance under each heading for each department, and compile a summary for the whole plant. The variances of his department are shown to each foreman. The superintendent receives a statement of classified variances for each department under his supervision, and the general manager gets a bird's-eye view of the whole plant's operation from a summary showing total variances of the entire plant. These statements are the means of controlling cost by focusing attention on the important points.

The standard manufacturing cost of product is computed from the operation costs, with allowance for shrinkage, as expressed by "yield factors" showing the relation of the units processed at each stage to the units of finished product.

STANDARD COST OF PRODUCT "D"

	Cost per unit processed in department	Yield factor	Cost per finished unit
Operation A	.06	1.20	.072
Operation B	.03	1.10	.033
Operation C	.05	1.00	.05
Total standard manufacturing cost			.155

These standard product costs may, if the variations (exclusive of idle time or unearned burden) are not too great, be taken as the basis for costing inventory and sales. But if standards have been set that are a long way from attainment, production may be priced at approximately actual cost by the use of ratios, as shown in this example:

	At standard cost	At actual cost	Ratio
Inventory beginning of period	1,000	1,100	1.10
Production for period	2,000	2,500	
Total	3,000	3,600	1.20
Less cost of sales	1,500	1,800	1.20
Inventory close of period	1,500	1,800	1.20

The results which our company secured from standard costs are indicated by the ratio of actual cost to standard, which has dropped from 1.40 at the beginning of 1927 when we adopted a standard cost plan, to around 1.10 at present. This is not positive evidence, because our standards have been changed during this period; some allowances increased, others reduced, but the savings indicated are probably not greatly distorted by these changes.

A comparison of product costs over this period shows a material reduction in the unit manufacturing cost of such items as blankets, but in felts processes such as tanning have been added and other changes made for the purpose of improving the product, so that the cost has not shown much reduction.

Conclusion

In conclusion, I conceive that our job as cost accountants does not end with the collection of routine figures. If it does, then we ourselves are waste, and subject to elimination. We must, to serve our full purpose, analyze and so present our facts, that they can serve as a sound basis for managerial decisions. It is not so difficult for management to reach wise decisions if all the facts are known, and in management I include all those who make decisions, whether the general manager whose decision may involve a new plant, or the foreman of a small department whose decision involves only the replacement of a machine part.

If we can properly serve management, we shall occupy an important place in industry, and I believe that the use of standards, where they apply, will help us to get there.

Box Board Production for August

WASHINGTON, D. C., August 5, 1929.—June production of box board, based on reports to the Department of Commerce by 92 firms operating 119 plants (reports for earlier months including five concerns now out of business) was 81.4 per cent of capacity, as compared with 86.2 per cent in May and 79.9 per cent in June, 1928. In the following table the capacity data vary according to the normal number of working days in each month:

BOXBOARD

Year and Month	Operation: Inch hours Capacity	Operation: Inch hours Operated	Operation: Per cent of Capacity	Production: Short Tons Capacity	Production: Short Tons Output	Production: Per cent of Capacity	New Orders Short Tons	Unfilled Orders (end of month) Short Tons
1928—								
Jan.	10,372,900	7,833,458	75.5	273,125	203,882	74.6	204,128	80,417
Feb.	10,372,900	8,136,737	78.4	273,125	211,862	77.6	215,333	85,862
March	11,312,244	8,843,542	78.2	297,108	227,384	76.5	244,871	93,380
April	10,474,300	8,311,710	79.4	275,100	221,079	80.4	211,304	84,513
May	10,893,272	8,733,965	80.2	286,104	242,394	84.7	224,366	73,157
June	10,893,272	8,199,515	75.3	286,104	228,646	79.9	228,252	77,782
Total 6 mos.	64,318,888	50,058,927	77.8	1,690,666	1,335,207	79.0	1,328,254	.....
1929—								
Jan.	11,417,328	9,297,029	81.4	307,268	248,290	80.8	241,086	87,974
Feb.	10,539,672	8,435,967	80.0	283,632	228,034	80.4	227,595	87,726
March	11,417,328	9,416,990	82.5	307,268	256,118	83.4	266,895	96,209
April	11,417,328	9,278,701	81.3	307,268	251,147	81.7	250,366	98,162
May	11,417,328	*9,526,053	*83.4	307,268	*264,830	*86.2	*240,395	*89,485
June	10,978,200	9,143,979	83.3	295,450	240,388	81.4	230,761	81,910
Total 6 mos.	67,186,584	55,098,719	82.0	1,808,154	1,488,807	82.3	1,457,098	.....

Year and Month	Shipments of boxboard Short Tons	Stocks of boxboard, end of month Short Tons	Consumption of waste paper: Capacity Short Tons	Consumption of waste paper: Consumed Short Tons	Per cent of Capacity	Stocks of waste paper end of month: At plants Short Tons	Stocks of waste paper end of month: In transit and unshipped purchases Short Tons
1928—							
January	196,984	49,032	255,225	189,744	74.3	153,747	62,181
February	209,477	50,350	255,225	193,966	76.0	140,104	60,088
March	237,621	40,439	276,966	209,649	75.7	139,255	47,322
April	220,315	40,319	256,450	211,898	82.6	132,621	47,551
May	235,794	49,107	266,708	220,750	82.8	127,217	46,375
June	223,901	53,560	266,708	204,468	76.7	130,484	43,480
Total 6 mos.	1,324,092	.....	1,577,282	1,230,475	78.0	.....	.....
1929—							
January	247,498	56,304	297,440	238,652	80.2	137,251	49,104
February	227,206	57,398	274,560	217,442	79.2	126,212	54,121
March	258,604	54,982	297,440	242,073	81.4	137,008	51,520
April	247,773	57,881	297,440	231,089	77.7	142,666	68,005
May	*260,283	*62,311	297,440	*248,813	*83.7	*150,048	54,433
June	235,260	62,379	286,000	233,559	81.7	158,223	56,924
Total 6 mos.	1,476,724	.....	1,750,320	1,411,628	80.6	.....	.....

* Revised.

Committee for Census of Distribution

WASHINGTON, D. C., August 12, 1929.—The Department of Commerce has announced the executive committee for the Census of Distribution, which has been approved by Secretary Lamont.

It includes; F. M. Feiker, (chairman) managing director, Associated Business Paper, Inc., New York; Dr. Melvin T. Copeland, porfessor of marketing, Harvard University; W. E. Freeland, Boston; Herbert T. Sheets, managing director, National Retail Hardware Association, Indianapolis, Ind.; and Henry S. Dennison, president the Dennison Manufacturing Company, Framingham, Mass.

The committee was named in accordance with a resolution adopted at the recent meeting of the Advisory Committee for the Census of Distribution to cooperate with the Bureau of the Census in drawing up schedules and in connection with other preliminary work to the taking of the distribution census next year.

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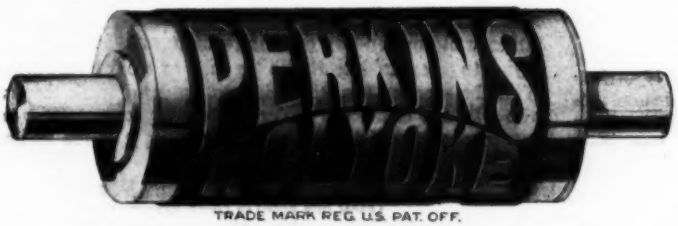

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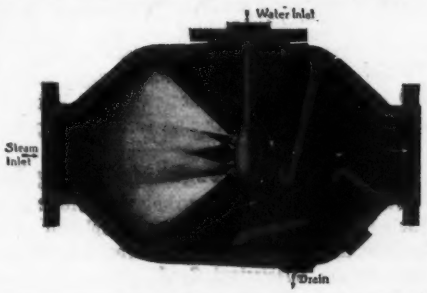

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Czechoslovak Paper Output Reduced

Extremely cold weather of the first three months of 1928 so restricted operations in the Czechoslovak pulp and paper industry, particularly mills depending upon a normal water supply, that output declined to less than a fourth that of the previous year, according to a report from Consul General Arthur C. Frost, Prague, made public by the Department of Commerce.

Production of pulp mills, therefore, declined, amounting to only 10,000 metric tons (metric ton = 2,205 pounds) as against 38,000 tons in the final quarter of 1928. Exports also declined, although to a less extent, shipments during the first quarter totaling 19,230 tons compared with 20,710 tons during the first quarter of 1928.

This year's shipments comprised 7,676 tons of unbleached and 11,554 tons of bleached chemical pulp, no mechanical pulp having been shipped. Germany was the leading purchaser, having taken 7,216 tons. The transit warehouses of Hamburg received 261 tons of unbleached and 150 tons of bleached pulp. Italy was the next largest purchaser, the remaining shipments going to France, Poland, Hungary, Austria, Belgium, the United States, Switzerland, and Spain.

The year 1928 closed with the paper trade more or less uncertain owing to the possibility of the Slovak Paper Mill of Ruzomberok withdrawing from the cartel, but a revival occurred in January when it was announced that the mill would continue its membership in the trust. According to the central sales office of the industry, production of wrapping paper during the first three months of 1929 totalled 33,500 tons compared with an estimated production of only 20,000 tons during the corresponding period last year. Exports during the first quarter amounted to 5,431 tons valued at approximately $463.760 as against 6,657 tons and $560,550 during the first quarter of 1928. This year's exports included 4,394 tons of undyed and 1,037 tons of dyed paper.

An interesting development of the wrapping paper market is the increased demand from Italy. To Italy, Czechoslovakia shipped 485 tons of wrapping paper during the first quarter of the year as against no exports in the same period last year, while Trieste took an additional 357 tons as compared with only 162 tons during the first three months of 1928. Hungary still continues, however, the principal purchaser of wrapping paper, taking almost one-half of the entire exports, followed by Poland, Italy, the United Kingdom and Switzerland.

Hill Tubular Agitator Installations

The Hill Clutch Machine and Foundry Company, of Cleveland, Ohio, has recently made the following installations of the Hill Tubular Agitators in paper mills:

The Fraser Paper Company, Madawaska, Me., two units for mixing paper stock and three units for mixing clay filler.

Kalamazoo Vegetable Parchment Company, Kalamazoo, Mich., one unit for mixing clay filler and one unit for mixing sizing.

The Keyes Fibre Company, Waterville, Me., two units for mixing long fiber wood stock.

Greenville Insulated Board Company, Greenville, Miss., two units for mixing long fiber wood stock.

All of the above units are operating in vertical tanks.

The Hill Clutch Machine and Foundry Company has also just closed contract with the Consolidated Paper Company, Monroe, Mich., for two large horizontal storage chests, 160 feet long and 200 feet long. In these chests the Hill Tubular Agitator unit will automatically travel back and forth to keep the stock alive.

Information Sought Regarding John Klebes

Relatives are anxious to obtain information regarding John Klebes, who for years has been employed in the paper industry. He was last heard from at Monroe, La., but left that city at the time of the Mississippi flood. Any information regarding Mr. Klebes sent to the office of the PAPER TRADE JOURNAL will be forwarded to his relatives.

Boston Paper Market Active

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., August 12, 1929.—The volume of business in paper continues to be gratifying to wholesalers for the season of the year. Some even say that business has been a little better during the week under review. "Good," "doing well," "very good," "pretty good and outlook good for fall," are among characterizations of the market by jobbers here. These expressions apply generally to both fine and coarse papers. With one house activity in coarse paper is more than that of a year ago. The box board market remains firm, with quotations at the same levels. If anything, prices are stronger, with the emphasis on the upper side of the range. Filled news board is quotable at $37.50 to $40 and chip board at $35 to $37.50.

Old papers continue dull, but with no price recessions. In bagging, manila rope is still on the decline, with foreign at a maximum of 4.50, compared with 4.75 a week ago, and domestic at a maximum of 4.75, against 5.00 last week. New and old domestic rags are unquotably changed. Foreign roofing rags are quotable at 1.55, some asking higher prices, but according to reports it seems doubtful if more than 1.55 can be obtained. Apparently, mills are rather well covered for present requirements, although they are buying to a certain extent. No big sales of stock have taken place. With the streams low, there is less water to wash the material with. In one instance a dealer is shipping four carloads of jute to a consumer who ordinarily buys from eight to ten carloads.

Ranier Completes Steam Plant

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 9, 1929.—The Ranier Pulp and Paper Company, which has a plant at Shelton, Wash., after undergoing a period of stress and expensive operation, has completed the construction of a steam plant and is now constructing a digester plant which it is expected will increase the earning capacity about 25 per cent while adding only 10 per cent to operating expenses, according to a recent report of the Manheim-Dibbern Company.

The Ranier Pulp and Paper Company has just declared dividends of 50 cents regular on the A stock and on the B stock 25 cents regular and 25 cents extra, payable September 1 to stock of record August 10. These dividends are identical with those paid the last quarter. This shows that both classes are on a dividend basis of $2 per share which gies a yield at present market of 35½ of about 5.6 per cent. Range on the A stock is 36 high and 29½ low.

Earnings for the fiscal year ended April 30, 1929, as previously reported, were $2.18 per share on the combined classes. Earnings behind the A shares were $4.86.

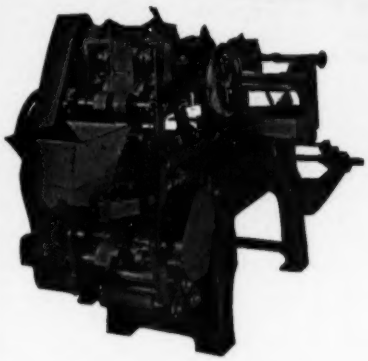
Nofuz Panelboard Leaflet

A new panelboard is described in a recent circular, D.M.F. 5150, released by the Westinghouse Electric and Manufacturing Company. This recent development has been designated the Nofuz Type NAB panelboard; it operates with 15 ampere deion principle circuit breakers in place of fuses and toggle switches. In a concise manner the booklet explains the uses and construction of the panelboard and its application to residences, hotels, stores, hospitals, and many other places. Wiring diagrams and photographs illustrate the folder.

Knowlton Bros. Outing

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., August 10, 1929.—Employees of Knowlton Brothers Paper Company and their families held their annual outing during the week at Southwick Beach, where an enjoyable time was had by all attending. A splendid dinner and a program of sports served to make the event interesting and it was voted by all to make it an annual occurrence. J. C. McCormick, assistant treasurer of the company, was general chairman of the affair, with a number of committeemen as aides.



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Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING AUGUST 12, 1929

SUMMARY

Cigarette paper	34 bls., 134 cs.
Wall paper	97 bls., 19 cs.
Paper hangings	5 pkgs., 13 bls., 25 cs.
News print	863 rolls
Printing paper	64 bls., 107 cs.
Photo paper	11 cs.
Gold coated paper	11 cs.
Surface coated paper	19 cs.
Baryta coated paper	269 cs.
Tissue paper	13 cs.
Transfer paper	21 cs.
Decalcomania paper	44 cs.
Colored paper	110 cs.
Wrapping paper	241 bls.
Packing paper	16 cs.
Transparent paper	10 cs.
Filter paper	10 cs.
Writing paper	21 cs.
Aluminum paper	20 cs.
Straw paper	24 rolls
Straw board	182 bdls., 63 rolls
Miscellaneous paper	428 cs.

CIGARETTE PAPER

Max Spiegel & Sons, Pres. Adams, Genoa, 34 bls.

P. J. Schweitzer, Pres. Adams, Marseilles, 134 cs.

WALL PAPER

F. J. Emmerich, Adriatic, Liverpool, 2 cs., 2 bls.

G. J. Hunken, Muenchen, Bremen, 5 cs.

F. A. Binder, Muenchen, Bremen, 4 bls.

Wedeman, Godknecht & Lally, Muenchen, Bremen, 9 bls.

Guaranty Trust Co., Deutschland, Hamburg, 5 cs.

R. E. Thibout, Deutschland, Hamburg, 2 cs.

Phoenix Shipping Co., Deutschland, Hamburg, 1 cs.

J. E. Bernard & Co., Lapland, Antwerp, 1 cs., 19 bls.

Prager Co., Inc., Lapland, Antwerp, 57 bls.

Kensington Wallpaper Co., Minnesota, London, 1 cs.

Schmidt & Pritchard, Pres. Roosevelt, Bremen, 4 bls.

F. A. Binder, Pres. Roosevelt, Bremen, 2 cs., 2 bls.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnesota, London, 15 cs. (Patterns).

W. H. S. Lloyd & Co., Minnesota, London, 6 cs., 13 bls.

A. C. Dodman, Jr., Inc., Scythia, Liverpool, 5 pkgs.

Whiting & Patterson Co., Inc., Olympic, Southampton, 4 cs.

NEWS PRINT

Parsons & Whittemore, Inc., Muenchen, Bremen, 643 rolls.

Perkins, Goodwin & Co., Deutschland, Hamburg, 142 rolls.

Stora Kopperberg Corp., Kungsholm, Gothenburg, 78 rolls.

PRINTING PAPER

Japan Paper Co., American Trader, London, 1 cs.

Japan Paper Co., Muenchen, Bremen, 25 cs.

Globe Shipping Co., Muenchen, Bremen, 2 cs.

P. C. Zuhlke, Muenchen, Bremen, 76 cs.

Windsor Newton, Inc., Tuscania, London, 3 cs.

Lathrop Paper Co., Inc., Bellflower, Manchester, 8 bls.

J. I. Bernitz, Naples Maru, Hamburg, 64 bls.

PHOTO PAPER

J. H. Schroeder Banking Corp., Muenchen, Bremen, 11 cs.

GOLD COATED PAPER

F. Murray Hill Co., Muenchen, Bremen, 11 cs.

SURFACE COATED PAPER

Phoenix Shipping Co., Deutschland, Hamburg, 3 cs.

P. C. Zuhlke, Lapland, Antwerp, 5 cs.

Gevaert Co. of America, Lapland, Antwerp, 11 cs.

BARYTA COATED PAPER

Globe Shipping Co., Pres. Roosevelt, Bremen, 269 cs.

TISSUE PAPER

Fidelity Trust Co., Muenchen, Bremen, 10 cs.

Meadows, Wye & Co., Scythia, Liverpool, 1 cs.

W. J. Byrnes & Co., Olympic, Southampton, 2 cs.

TRANSFER PAPER

F. L. Kramer & Co., Muenchen, Bremen, 21 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Scythia, Liverpool, 40 cs.

C. W. Sellers, Pres. Roosevelt, Bremen, 4 cs.

COLORED PAPER

S. Gilbert, Muenchen, Bremen, 26 cs.

Whiting & Patterson Co., Inc., Muenchen, Bremen, 4 cs.

Dietzgen & Co., Inc., Naples Maru, Hamburg, 41 cs.

Henningsen, Pres. Roosevelt, Bremen, 1 cs.

H. Lange, Pres. Roosevelt, Bremen, 10 cs.

S. Gilbert, Pres. Roosevelt, Bremen, 26 cs.

F. L. Kramer & Co., Pres. Roosevelt, Bremen, 1 cs.

WRAPPING PAPER

J. P. Heffernan Paper Co., Lapland, Antwerp, 218 bls.

C. K. MacAlpine & Co., Kungsholm, Gothenburg, 23 bls.

PACKING PAPER

American Express Co., Deutschland, Hamburg, 16 cs.

TRANSPARENT PAPER

Central Hanover Bank & Trust Co., Deutschland, Hamburg, 10 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Tuscania, London, 10 cs.

WRITING PAPER

B. Altman & Co., Olympic, Southampton, 12 cs.

Guilbert Freres, Olympic, Southampton, 4 cs.

A. W. Fenton, Inc., Olympic, Southampton, 1 cs.

Electo Co., Olympic, Southampton, 1 cs.

J. E. Bernard & Co., Mauretania, Southampton, 1 cs.

Globe Shipping Co., Mauretania, Southampton, 2 cs.

ALUMINUM PAPER

Catty Foil Co., Lapland, Antwerp, 20 cs.

STRAW PAPER

Hygrade Eagle Paper Products Corp., Deutschland, Hamburg, 20 rolls.

Gerhard & Hey, Deutschland, Hamburg, 4 rolls.

STRAW BOARD

A. Vuyk, Veendam, Rotterdam, 63 rolls, 182 bdls.

MISCELLANEOUS PAPER

E. Dietzgen & Co., Inc., Veendam, Rotterdam, 21 cs.

Globe Shipping Co., Veendam, Rotterdam, 98 cs.

S. Gilbert, Muenchen, Bremen, 3 cs.

C. K. MacAlpine & Co., Kungsholm, Gothenburg, 168 bls.

H. Reeve Angel & Co., Kungsholm, Gothenburg, 7 cs.

Van Ommen & Co., Pres. Adams, Genoa, 16 cs.

American Express Co., Rochambeau, Havre, 79 cs.

Standard Products Corp., Rochambeau, Havre, 140 cs.

Coenca, Morrison Co., Rochambeau, Havre, 17 cs.

Japan Paper Co., Rochambeau, Havre, 36 cs.

F. C. Strype, Conte Grande, Genoa, 11 cs.

RAGS, BAGGINGS, ETC.

Irving Trust Co., Mercier, Antwerp, 34 bls. rags.

Equitable Trust Co., Mercier, Antwerp, 202 bls. flax waste.

Brown Bros. & Co., Mercier, Antwerp, 117 bls. rags.

Irving Trust Co., Veendam, Rotterdam, 53 bls. rags.

W. von Doorn, Veendam, Rotterdam, 36 bls. rags.

Katzenstein & Keene, Inc., Veendam, Rotterdam, 144 bls. rags.

Trust Co. of North America, Adriatic, Liverpool, 59 bls. rags.

Interstate Trust Co., Deutschland, Hamburg, 28 bls. jute waste.

Equitable Trust Co., Deutschland, Hamburg, 46 bls. rags.

Brown Bros. & Co., Manchurian Prince, Dundee, 62 bls. paper stock.

Madison State Bank, Bellflower, Manchester, 110 bls. new cuttings.

Equitable Trust Co., Bellflower, Manchester, 33 bls. paper stock.

Irving Trust Co., Bellflower, Manchester, 40 bls. paper stock.

E. J. Keller Co., Inc., Bellflower, ——, 68 bls. bagging.

S. Birkenstein & Son, Minnesota, London, 98 bls. rags.

Castle & Overton, Inc., Minnesota, London, 49 bls. rags.

J. Cohen & Son, Scythia, Liverpool, 22 bls. rags.

Amerjack, Somme & Co., Inc., Kepwick Hall, Alexandria, 200 bls. rags.

P. Berlowitz, Kepwick Hall, Alexandria, 186 bls. rags.

Chemical National Bank, Hektor, Barcelona, 100 bls. rags.

Irving Trust Co., Hektor, Barcelona, 39 bls. rags.

Castle & Overton, Inc., Hektor, Barcelona, 230 bls. rags.

E. J. Keller Co., Inc., Hektor, ——, 120 bls. rags.

Jaffe Products Co., Nordbo, Havana, 20 bls. rags.

E. J. Keller Co., Inc., Nordbo, ——, 10 bls. rags.

Royal Manfg. Co., Borodino, Antwerp, 47 bls. cotton waste.

Darmstadt, Scott & Courtney, Borodino, Antwerp, 93 bls. rags.

D. M. Hicks, Inc., Borodino, Antwerp, 177 bls. flax waste.

Castle & Overton, Inc., Borodino, Antwerp, 88 bls. rags.

E. Mayer, Borodino, Antwerp, 108 bls. rags.

W. Steck & Co., Borodino, Antwerp, 111 bls. jute card waste.

E. J. Keller Co., Inc., Borodino, ——, 189 bls. flax waste.

E. J. Keller Co., Inc., Borodino, ——, 73 bls. linen threads.

B. D. Kaplan, Ambridge, Antwerp, 7 bls. rags.

Castle & Overton, Inc., Ambridge, Antwerp, 43 bls. bagging.

International Purchasing Co., Ambridge, Antwerp, 30 bls. bagging.

G. W. Millar & Co., Ambridge, Antwerp, 100 bls. flax waste.

American Express Co., Ambridge, Antwerp, 13 bls. rags.

A. W. Fenton, Inc., Pres. Harding, Bremen, 108 bls. rags.

Manufacturers Trust Co., Pres. Harding, Bremen, 6 bls. rags.

E. Mayer, Pres. Harding, Bremen, 10 bls. rags.

Robert Blank, Rigel, Valencia, 190 bls. rags.

S. Birkenstein & Son, Rigel, Valencia, 96 bls. rags.

French American Banking Corp., Rigel, Genoa, 49 bls. rags.

French American Banking Corp., Rigel, Leghorn, 102 bls. rags.

F. A. Stern, Rigel, Marseilles, 114 bls. rags.

W. Schall & Co., Rigel, Barcelona, 204 bls. rags.

Trust Co. of North America, Savoia, Naples, 22 bls. rags.

E. J. Keller Co., Inc., Naples Maru, ——, 7 bls. rags.

Castle & Overton, Inc., Vermont, France, 184 bls. rags.

Castle & Overton, Inc., Vermont, France, 56 bls. bagging.

OLD ROPE

Brown Bros. & Co., Fred. VIII, Copenhagen, 200 coils.

Anglo South American Trust Co., Veendam, Rotterdam, 43 coils.

Brown Bros. & Co., Lapland, Antwerp, 51 coils.

Trust Co. of North America, Kepwick Hall, Naples, 34 bls.

Brown Bros. & Co., Borodino, Newcastle, 355 coils.

Brown Bros. & Co., Borodino, Hull, 64 coils.

W. Steck & Co., Borodino, Hull, 111 coils.

W. Steck & Co., Rigel, Marseilles, 137 coils.

E. J. Keller Co., Inc., Borodino, ——, 62 bls.

CHINA CLAY

Paper Makers Importing Co., Wearbridge, Fowey, 456 tons, 11 cwt.

I. W. Higman Co., Inc., Wearbridge, Fowey, 1,003 tons, 4 cwt.

CASEIN

Central Hanover Bank & Trust Co., Nordbo, Buenos Aires, 334 bags, 20,043 kilos.

Casein Manfg. Co., Nordbo, Buenos Aires, 699 bags, 34,132 kilos.

A. Hurst & Co., Rochambeau, Havre, 135 bags.

WOOD PULP

Atterbury Bros., Inc., Stavangerfjord, Oslo, 500 bls. wood pulp.

National City Bank, Stavangerfjord, Oslo, 1,000 bls. sulphite.

Chemical National Bank, Deutschland, Hamburg, 126 bls. sulphite, 25 tons.

Irving Trust Co., Deutschland, Hamburg, 127 bls. wood pulp, 25 tons.

Castle & Overton, Inc., Amasis, Hamburg, 1,596 bls. wood pulp, 239 tons.

Perkins, Goodwin & Co., Kungsholm, Gothenburg, 127 bls. sulphite.

E. M. Sergeant & Co., Kungsholm, Gothenburg, 598 bls. kraft pulp.

Price & Pierce, Ltd., Kungsholm, Gothenburg, 1,250 bls. wood pulp.

(Continued on page 82)

Ticonderoga Machine Works
Ticonderoga, N. Y., U. S. A.
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With Flexible Blades, Universal Adjustment and Control (PATENTED)
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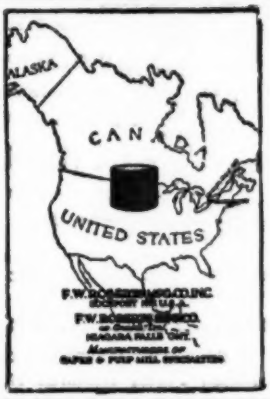
B U R R S



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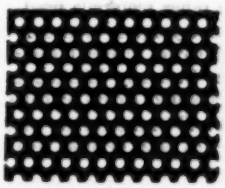
For Pulp and Paper Mills



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Imports of Paper and Paper Stock

(Continued from page 80)

E. J. Keller Co., Inc., Naples Maru, ——, 747 bls. wood pulp, 113 tons.

WOOD FLOUR

State Chemical Co., Veendam, Rotterdam, 900 bags.

——, Veendam, Rotterdam, 400 bales.

The Burnet Co., Kungsholm, Gothenburg, 291 bags.

PHILADELPHIA IMPORTS

WEEK ENDING AUGUST 12, 1929

J. Richardson Co., Wearbridge, Fowey, 631 tons china clay.

Atlantic National Bank, Wearbridge, Fowey, 694 tons, 4 cwt. china clay.

Atlantic National Bank, Wearbridge, Fowey, 160 casks china clay, 80 tons.

J. B. Moors & Co., Wearbridge, Fowey, 793 tons, 6 cwt. china clay.

Paper Makers Importing Co., Wearbridge, Fowey, 1,062 tons, 15 cwt. china clay.

National City Bank, London Exchange, London, 86 bls. rags.

National City Bank, London Exchange, London, 107 bls. bagging.

Philadelphia National Bank, London Exchange, London, 86 bls. rags.

MacBlaine Co., Ambridge, Antwerp, 50 bls. rags.

E. Butterworth & Co., Inc., Ambridge, Antwerp, 69 bls. bagging.

E. Butterworth & Co., Inc., Ambridge, Antwerp, 106 bls. rags.

Philadelphia National Bank, Ambridge, Antwerp, 246 bls. rags.

S. E. Ingber, Ambridge, Antwerp, 212 bls. rags.

F. Stern, Ambridge, Antwerp, 48 bls. rags.

Castle & Overton, Inc., Ambridge, Antwerp, 679 bls. rags.

A. Hurst & Co., Rigel, Marseilles, 10 bls. rags.

Castle & Overton, Inc., Rigel, Valencia, 329 bls. rags.

E. Mayer, Rigel, Valencia, 92 bls. rags.

Banco Com'l Italiane Trust Co., Rigel, Leghorn, 179 bls. rags.

National City Bank, Rigel, Leghorn, 93 bls. rags.

Philadelphia National Bank, Rigel, Barcelona, 92 bls. rags.

Trust Co. of North America, Savoia, Messina, 75 bls. rags.

Trust Co. of North America, Savoia, Palermo, 30 bls. rags.

Castle & Overton, Inc., Excello, Italy, 2 bls. rags.

Castle & Overton, Inc., Exanthia, Spain, 142 bls. rags.

Castle & Overton, Inc., Cabo Torres, Spain, 50 bls. rags.

Castle & Overton, Inc., Meltonian, England, 121 bls. rags.

E. J. Keller Co., Inc., City of Alton, ——, 135 bls. rags.

E. J. Keller Co., Inc., Vermont, ——, 98 bls. rags.

BOSTON IMPORTS

WEEK ENDING AUGUST 12, 1929

Kalbfleisch Corp., Culberson, Buenos Aires, 417 bags casein.

1st Natl. Bank of Boston, Culberson, Buenos Aires, 1,835 bags casein.

G. F. Malcolm, Scythia, Liverpool, 5 cs. tissue paper.

Stone & Downer, Scythia, Liverpool, 8 bls. printing paper.

E. Butterworth & Co., Inc., Ambridge, Antwerp, 80 bls. flax waste.

E. Butterworth & Co., Inc., Ambridge, Antwerp, 159 bags pickers.

Ayres W. C. Jones Co., Ambridge, Antwerp, 26 bls. cotton waste.

True & McClelland, Ambridge, Antwerp, 245 bls. rags.

American Express Co., Ambridge, Antwerp, 102 rolls paper.

V. Galaup, Ambridge, Antwerp, 93 bls. rags.

Baring Bros. & Co., Ambridge, Antwerp, 77 bls. rags.

Train Smith Co., Ambridge, Antwerp, 158 bls. rags.

Castle & Overton, Inc., Burgerdyk, Holland, 1,822 bls. wood pulp.

Cost of Distribution

"Cost of distribution" is a term which is often loosely employed. Just what are the elements which constitute it? Obviously every item of cost between the completed product on the floor of the factory shipping room and the consumer's hands is a part of the total. There are the costs of physical distribution; wrapping, packaging, freight charges, warehousing, and trucking. Then there is the separate class of selling costs; salesmen's salaries and commissions, travelling expenses, sales executives' salaries, office expense, and advertising expense. There is in addition a third class of distribution costs which is of a functional nature, and incidental to certain systems of distribution. This includes such items as jobbers' and brokers' commissions and profits.

Confirms Sale of Colorado Pulp & Paper Co.

BRIGHTON, Colo., August 12, 1929—Judge Samuel W. Johnson, in the district court here, last week, signed an order confirming the sale of the Colorado Pulp and Paper Company's property to I. Rude and Max Bronstine both of Denver, at the price of $228,000 which was bid at the recent auction. When the receiver George W. Beck was appointed by Judge Johnson, the court named the upset price at $300,000, but after six attempts to sell the property there was no bid anywhere near the price named, the bid mentioned herein being the nearest.

Ernest Morris, attorney for Charles B. Myers, original owner of the company and also the owner of some bonds in the reorganized concern,—after its first receivership—signified that he will carry the case to the Supreme court. Other attorneys representing various creditors made the same statement before the court and Judge Johnson gave all sixty days in which to file a bill of exceptions.

Judge Johnson also signed an order which aims at assembling all bonds to facilitate future settlement of the receivership. Mr. Meyes has already gone to the supreme court claiming that the sale as made was illegal.

Just what loss there will be to the bondholders if the bid in price is affirmed is not definitely stated, but there is certain to be some.

Bamboo Found Good Paper Material In India

Bamboo has been found a good potential source for paper by experiments at the Indian Forest Research Institute at Dehra Dun, according to a report from Vice Consul W. H. Minor, Calcutta, made public by the Department of Commerce.

Experiments the past year are said to have proved that white paper of excellent quality can be made from bamboo, and that the pulp can be manufactured at a cost which compares favorably with other materials used.

Some progress is already reported in the commercial application of the new material for paper, he states. The Titaghur Paper Mills Company Limited have acquired an area of bamboo in Cuttack and Angul and it is believed they will eventually erect a pulp mill at the former place. It is understood that keen interest has also been aroused in this process in London financial circles and that a movement is afoot to start a large bamboo pulp company in India.

New Reservoir Opened at Moshier

[FROM OUR REGULAR CORRESPONDENT]

POTSDAM, N. Y., August 10, 1929.—John N. Carlisle, of the St. Regis Paper Company, and Edwin S. Cullings, engineer of the Black River Regulating Board, attended the opening of the new reservoir at Moshier, which will eventually hold 600,000,000 cubic feet of water besides proving of immense benefit to paper manufacturing concerns in this district. Water has been poured into the six mile stretch of the Beaver River between the Stillwater reservoir and the newly completed power plant at Moshier on which engineers have worked for the past two years and the new development is already proving of aid to manufacturing interests. The Moshier plant, which will develop 12,000 horse power, is the eighth built by the Carlisle interests on the Beaver River which now develops a total of 71,300 horse power. The others are located at High Falls, Taylorville, Elmer Falls, Soft Maple, Eagle Falls and Effley Falls. Engineers estimated that the water in the Stillwater reservoir will only be lowered a slight amount in making the new fill in the lower stretch.

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THE CLARK-AIKEN CO.

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H. C. Clark & Son Machine Co.
PAPER MILL MACHINERY
LEE, MASS.

Revolving Paper Cutters—Rag Cutters—Cylinder Paper Machines—Washing and Beating Engines—Chilled Iron and Paper Calenders—Fan and Stuff Pumps—Engine Roll Bars and Bed Plates—
Cylinder Molds—Marshall Drives—Slitters and Rewinders—Reels—Dryers with Improved Packing Boxes—Wet Machines—Gun Metal and Rubber Rolls—Rolls Reground.

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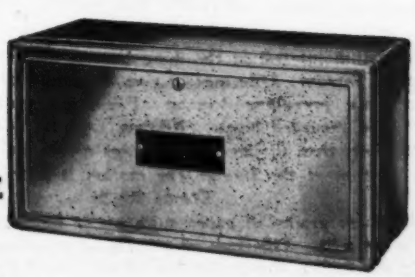

GRIFFITH-HOPE CO., West Allis, Wisc.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, August 14, 1929.

Conditions in the local paper market are fairly satisfactory for the time of year, although most of the business transacted of late has consisted of small orders for immediate requirements. However, inquiries for future account are being received in good volume and a material broadening of the situation is confidently anticipated after the holiday season, in most quarters. Prices on practically all of the standard grades of paper rule steady and unchanged.

The news print market is exhibiting a strong undertone, with circulations of the leading daily and Sunday newspapers increasing and advertising activity steadily growing. Production is being maintained in good volume and offerings are being freely taken up by the publishers. Stocks at Canadian and United States mills are not excessive. Quotations are holding to the prices recently agreed upon by the leading news print manufacturers.

Most of the business transacted in the paper board market during the past week was along routine lines. No further price changes have been reported. The fine paper market is in a sound position, with prices holding to schedule and reports of concessions infrequent. Demand for the various grades of coarse paper is insistent. Summer specialties are still in excellent request. Wrapping paper is moving in satisfactory volume.

Mechanical Pulp

Offerings of ground wood pulp are rather limited at present, due mainly to curtailed production in North America and abroad. While demand for the various grades of mechanical pulp is mostly seasonal, prices are generally holding to the levels which have prevailed for some time past and there is little talk of concessions around at present.

Chemical Pulp

Steadiness prevails in the chemical pulp market. Strong unbleached sulphite continues in a sound position, with producers booked well ahead. Imported Mitcherlich unbleached is still displaying strength and the recently advanced prices are being maintained. Both domestic and imported kraft pulp are also showing signs of improvement.

Old Rope and Bagging

The old rope market was moderately active during the past week. Domestic manila rope is still offered at from $5.00 to $5.25 and foreign manila rope at from $4.60 to $4.85. Mixed strings are moving in fair volume. No radical changes were reported in the bagging market. Both scrap and gunny bagging are spotty. Burlap is in good request. Prices generally remain unchanged.

Rags

Paper mill interest in the domestic rag market is rather indifferent at present. Offerings of cotton cuttings are about sufficient to meet the prevailing demand. Prices are generally holding to previously recorded levels. Roofing rags are beginning to move more freely than of late. Mixed rags are in satisfactory request. The position of the foreign rag market is practically unchanged.

Waste Paper

The lower grades of paper stock are in improved demand from the board mills. Offerings of strictly folded news are scarce and prices are firmer, this grade now being quoted at from .60 to .65. Mixed paper is fairly active. Old kraft machine compressed bales are moving at a satisfactory pace. Container manilas are steady and unchanged. Soft white shavings continue in good request.

Twine

Trading in the twine market was mostly along routine lines during the past week. Although business at present is rather lifeless there should be a general revival of activities after Labor Day. Quotations on the various grades generally remain steady at the levels which have been maintained for some considerable time past.

Sylvania to Make Transparent Paper

The Sylvania Industrial Corporation, of the Chanin Building, 122 East 42nd Street, New York, announces that the plans of its Fredericksburg, plant, located between the Rapahannock River and the R. F. and P. and Virginia Central railroads, are now completed and the railroad sidings being in place, actual construction work is going to start next week.

In this plant the Sylvania Industrial Corporation is going to manufacture transparent paper similar to the imported and domestic types which are known under the trade names of Fenestra, Cellophane, etc., mainly to take the place of the foreign material which is still being imported in regular quantities and the corporation has, for the purpose, acquired exclusive licenses from the European patentees.

T. A. Jones Resigns From Township Trustees

DAYTON, Ohio, August 12, 1929.—Recently T. A. Jones of Excello, Ohio, resigned as a member of the Lemon Township Board of Trustees, a post he had held for 19 years, and Theodore Whresman has been elected to take his place Mr. Jones who is the head of the Harding-Jones Paper Company in Execello, Butler county, always was interested in the civic affairs of the township in which he resided and though his duties as president and general manager of the paper company were pressing, he managed to devote time to the community's affairs and his decision to give up the work was prompted only by the fact he desired to make an extended trip. Nineteen years of continuous service for the public, without thought of renumeration, meant much to the locality. Excello is located two miles east of Middletown and Lemon township embraced a busy agricultural and industrial section.

To Confer on Dumping of Salt Cake

WASHINGTON, D. C., August 14, 1929.—The Customs Bureau, which has been making an investigation into the alleged dumping of salt cake on the American market from Germany has received all of the foreign reports on the investigation. It is probable that within a month or so that a conference will be held here on the subject.

Survey Gray's Harbor Pulp Prospects

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 9, 1929.—Two members of the State Tax Commission of the State of Washington are at Hoquiam to make a survey of properties of the Grays Harbor Pulp and Paper Company. Their findings will be used in settling two appeals now before the commission as previously mentioned, one lodged by the company seeking lower valuation for tax purposes, and the other by Assessor R. A. Wiley protesting reductions.

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Approved chemists to American Paper and Pulp Association and American Association of Woodpulp Importers.

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, August 14, 1929.

BLANC FIXE.—The blanc fixe market is practically unchanged. Demand for the pulp and the powder is seasonal. Prices are holding to schedule. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is still selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—Conditions in the bleaching powder market are fairly satisfactory. Shipments against contract are going forward in normal volume for the season. Prices are holding to former levels. Bleaching powder is still selling at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Some improvement was noticed in the casein market. Domestic casein is now quoted at from 15 cents to 16 cents per pound. Argentine standard ground is selling at from 15½ cents to 16 cents per pound and finely ground at from 15¾ cents to 16¼ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—The caustic soda market is exhibiting a strong undertone. Contract shipments are moving at an excellent pace. Prices are steady. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Steadiness prevails in the china clay market. The contract movement is well up to average. Prices are generally holding to schedule. Imported china clay is still quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $15 per ton, at mine.

CHLORINE.—Supplies of chlorine are moving into consumption in good volume. Despite reports of lower prices in the Far West the local market is steady. Chlorine is quoted at 3 cents a pound, in tanks, on multi-unit cars, at works, on standard contracts. The spot quotation ranges from 3¾ cents to 3½ cents per pound.

ROSIN.—The rosin market was irregular and prices declined slightly. The grades of gum rosin used in the paper mills are now quoted at from $8.55 to $8.60 per 280 pounds, in barrels, on dock. Wood rosin is selling at from $6.75 to $7.80 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Offerings of salt cake continue decidedly limited and the market is in a sound position. Contract shipments are moving in heavy volume. Prices are very firm. Salt cake is quoted at from $17 to $21 per ton, while chrome salt cake is still selling at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—Most of the business transacted in the soda ash market was along routine lines. Shipments against contract are well up to average for the time of year. Prices are generally holding to previously quoted levels. Contract quotations on soda ash, in car lots, at works, are: in bags, $1.32½; in barrels, $1.55.

STARCH.—Demand for starch from the paper mills was rather light during the past week. Contract shipments were about normal for the season. Prices remain unaltered, in most instances. Special paper making starch is still quoted at $3.82 per 100 pounds, in bags, and at $3.99 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—No radical changes were reported in the sulphate of alumina market. Supplies are going forward to the pulp and paper mills in good volume. Commercial grades are quoted at from $1.40 to $1.55, in bags, and iron free at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The tone of the sulphur market is steady. Prices are holding to schedule. Sulphur is quoted at $18 per ton, in lots of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—Business in the talc market is fairly satisfactory for the season. Demand for this product is routine. Prices remain unaltered. Domestic talc is selling at from $16 to $18 per ton, in bulk, at eastern mines, while imported talc is offered at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@53.25
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	37.50	@40.00
Straw	52.50	@55.00
Chip	35.00	@37.50
Binders' Boards	65.00	@70.00
Sgl. Mla. Ll. Chip.	47.50	@50.00
Wood Pulp	80.00	@85.00
65 Test Jute Liner.	52.50	@ —
85 Test Jute Liner.	55.00	@ —

Mechanical Pulp

(On Dock)

No. 1 Imported—		
Moist	28.00	@31.25
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@29.00
Screenings	15.00	@20.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.40
Easy Bleaching	2.90	@ 3.10
No. 1 strong unbleached	2.70	@ 3.00
Mitscherlich unbleached	2.80	@ 3.25
No. 2 strong unbleached	2.40	@ 2.50
No. 1 Kraft	2.40	@ 2.75
No. 2 Kraft	2.35	@ 2.50
Sulphate—		
Bleached	3.60	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.65	@ 3.00
News Sulphite	2.50	@ 2.70
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.50	@ 3.30
Soda Bleached	3.10	@ 3.25
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.65	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1.	11.00	@11.50
New White, No. 2.	8.00	@ 8.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	11.00	@11.50
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Blue Overall	7.50	@ 8.00
Washables	4.75	@ 5.25
Fancy	5.75	@ 6.25
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings.	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings.	10.00	@11.00
New White Cuttings.	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens.	7.50	@ 8.25
No. 2 White Linens.	5.75	@ 6.75
No. 3 White Linens.	4.75	@ 5.25
No. 4 White Linens.	3.00	@ 3.50
No. 1 White Cotton.	5.50	@ 6.50
No. 2 White Cotton.	4.50	@ 5.50
No. 3 White Cotton.	3.00	@ 4.00
No. 4 White Cotton.	1.90	@ 2.15
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	2.00	@ 2.10
Dutch Blue Cottons	2.25	@ 2.40
French Blue Linens	2.75	@ 2.85
German Blue Linens.	2.35	@ 2.55
German Blue Cottons	2.15	@ 2.25
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.60	@ 1.65
Old Shopperies	1.55	@ 1.60
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.60	@ 1.70
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.60	@ 4.85
Domestic	5.00	@ 5.25
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1.	2.50	@ 2.60
White envelope cuttings	3.00	@ 3.50
Flat Stock—		
Stitchless	1.60	@ 1.70
Overissue Mag.	1.50	@ 1.60
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.00	@ 1.10
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.50	@ 1.75
Extra No. 1 old	1.25	@ 1.35
Print	.75	@ .80
Container	.57½	@ .60
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.90	@ 2.00
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	.75	@ .80
Strictly Folded	.60	@ .65
No. 1 Mixed Paper	.42½	@ .47½
Common Paper	.30	@ .35

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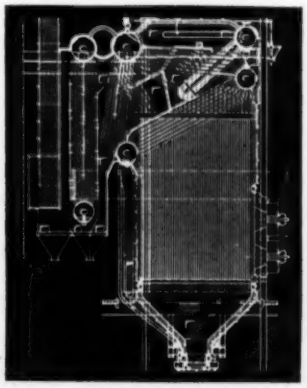

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Result:—Enormous savings in cost of pulp and paper produced.

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CORNWELLS HEIGHTS (PHILA.), PA.

Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¾
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¼	@	.07¾
No. 2 S.&S.C. Book	.05¼	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	4.25	@	4.50
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¾	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.25	@	1.35
Solid Books	1.25	@	1.30
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.75	@	.80
Folded News (over-issue)	.80	@	.85
Old Newspapers—			
No. 1	.65	@	.70
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.60	@	.65
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05¾
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	75.00
News Board	35.00	@	40.00
Chip Board	32.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03¼
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.80	@	1.90
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.40	@	1.50
No. 2 Books, light	1.05	@	1.15
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.60	@	.65
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.80	@	.85
Old Newspaper	.50	@	.55

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2	2.00	@	2.25
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05¼	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¼	@	.06½
Manila, Sul. No. 2	.03¼	@	.04½
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.04½	@	.05½
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls .009	52.50		
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	50.00
Single White, Patent Coated Newsboard			
Bender	65.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	1.75	@	1.80
Print Manila	.80	@	.90
No. 1 Mixed Paper	.40	@	.45
Overissue News	.65	@	.70
Old Newspapers	.50	@	.52½
Box Board, Chip	.55	@	.60
Repacked	.02½	@	.03¼
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.50	@	1.75
Manila Rope—			
Foreign	—	@	4.50
Domestic	—	@	4.75
Transmission Rope	2.00	@	2.25
Mixed Strings	1.25	@	—
Jute Wool Strings	1.00	@	1.05
Jute Carpet Threads	1.00	@	1.10
Scrap Burlaps	1.37½	@	1.50
Scrap Sisal	1.87½	@	2.00
Scrap Sisal for shredding	1.85	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	3.00	@	3.12½

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.50	@	—
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	—	@	1.55
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.00	@	5.12½
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	—
Old Linsey Garments	1.85	@	1.90

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¾	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.90	@	—
(Delivered Toronto)			
News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

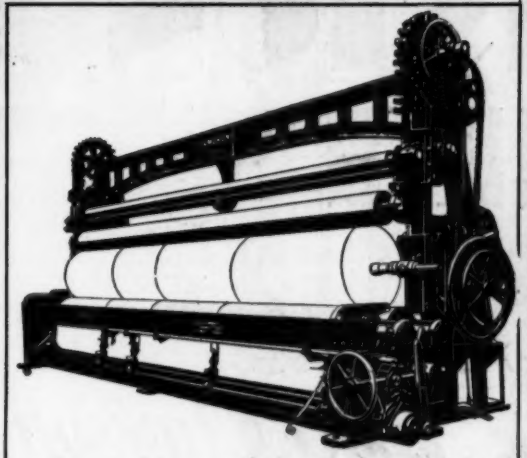
Ground Wood	30.00	@	31.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	77.00	@	—
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.10	@	.10½
Fancy Shirt Cuttings	.05½	@	—



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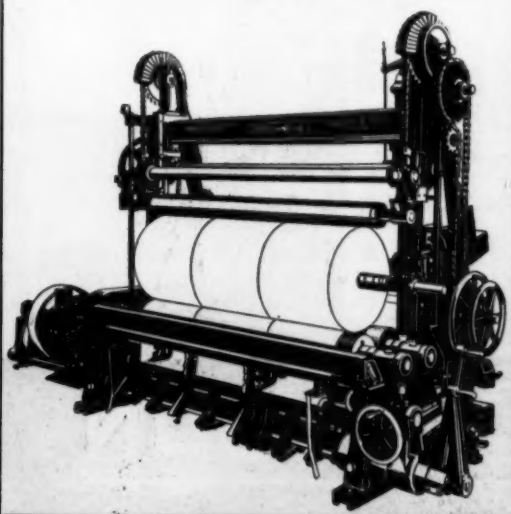

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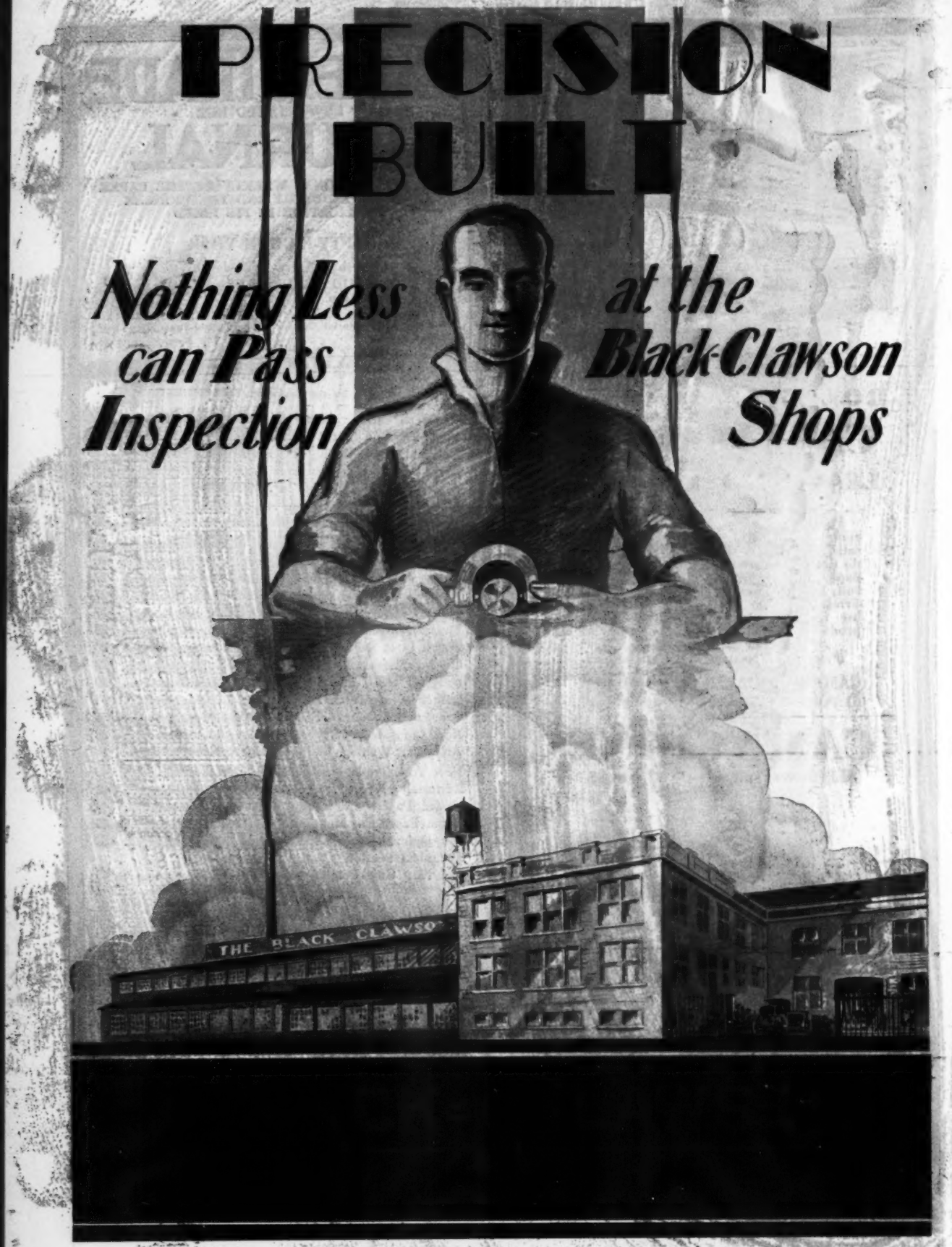
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